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Family Economics and Nutrition Review

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Does the 1983 Thrifty Food Plan Provide a Nutritionally Adequate Diet at the Cost Level Currently Used?

By Shirley Gerrior
Nutritionist
Center for Nutrition Policy and Promotion

This study is an evaluation of USDA's thrifty food plan, revised in 1983. It consists of two components: (1) a review of the nutritional adequacy of the 1983 plan and (2) a partial revision of the 1983 plan adjusted for updated nutrient data and dietary standards at a specified cost level. Data used are from the 1977-78 and 1987-88 Nationwide Food Consumption Surveys and USDA's National Nutrient Data Bank. The review shows that with the exception of magnesium the nutritive value of the 1983 thrifty food plan meets or exceeds dietary standards used in the development of the 1983 plan. The 1983 thrifty food plan fails to meet current recommendations for total fat, saturated fat, and cholesterol for most sex-age groups. The partial revision generates a nutritious diet that meets dietary guidance and 100 percent of the 1989 RDAs for all nutrients except zinc at the current thrifty food plan cost level. This evaluation identifies the limitations of the plan currently used but also shows that a nutritious plan can be developed that meets current dietary recommendations. These findings are useful to USDA researchers and policymakers as they prepare to revise the thrifty food plan.

The U.S. Department of Agriculture (USDA) has prepared guides for selecting nutritious diets at different levels of cost for 70 years. Early diet guides or plans of the 1920's provided the consumer with practical and economical advice on healthy diets. In 1933, diet plans were developed at four levels of nutritive content and cost—the restricted diet for emergency use, the minimum cost diet, the moderate cost diet, and the liberal cost diet. The two lower cost plans were written

for low-income families particularly affected by the Great Depression and the Dust Bowl. Since then, food plans have been revised periodically to reflect up-to-date nutritive information, consumption behavior, and food prices (2). In the early 1960's, the economy food plan was designed to cost 75 to 80 percent of the USDA low-cost plan while providing a nutritionally adequate diet for families who had less money to spend on food (2). This plan was used as a basis of the food stamp allotment until it was replaced by the thrifty food plan (TFP) in 1975. The TFP was

based on the most recent information on food composition, food consumption, food costs, and nutritional requirements available at that time.

The most recent revision of the TFP was published in 1983 (6). As do the more costly plans, the TFP specifies the quantities of different types of foods (or food groups) that households may use to provide nutritious meals and snacks for household members (table 1, p. 4). The assortment of foods in the plan is based on food consumption patterns of families with relatively low food costs and allows for a nutritious, palatable, and economical diet. The TFP includes larger proportions of foods that are economical sources of nutrients than do the other plans.

A revision of this plan was scheduled for 1993 using 1987-88 Nationwide Food Consumption Survey (NFCS) data.

This revision would have incorporated changes in nutritional recommendations, food composition, food consumption behavior, and food costs; however, because of nonresponse issues related to the data source, the revision was not completed (5). Historically, the NFCS has been a significant data source in the development of USDA food plans by providing two types of information: food used by households during a 7-day period and the costs for these foods; and the food eaten by individuals in the same households during a 3-day period (12).

Because of the length of time between usable USDA surveys for food plan development, the Center for Nutrition Policy and Promotion¹ (which develops the TFP) and the Food and Consumer Service² (which administers the TFP)

jointly approved an evaluation of the 1983 TFP. This article reports the results of this evaluation, which consisted of a review of the 1983 TFP (TFP-R) and a partial revision of the 1983 TFP (TFP-PR). Three research questions were addressed: (1) Is the 1983 TFP nutritionally adequate in terms of current dietary recommendations (TFP-R)? (2) Can a TFP be developed that meets dietary recommendations at current cost level (TFP-PR)? and (3) What are the implications of these findings?

¹The 1983 TFP was developed by the U.S. Department of Agriculture's Human Nutrition Information Service (HNIS), Nutrition Education Division. The Center for Nutrition Policy and Promotion (CNPP) was created December 1, 1994. CNPP is comprised of the former Nutrition Education Division of HNIS and the former Family Economics Research Group of the Agricultural Research Service.

²Food and Consumer Service was formerly Food and Nutrition Service.

Definition of Terms

TFP-83. Most recent revision of the thrifty food plan.

TFP-R. Review of the TFP-83.

TFP-PR. Partial revision of the TFP-83.

Features of each term

Term	Methods	Dietary standard	Sex-age groups	Consumption patterns	Foods and nutrient data	Food group names	Pounds of food groups
TFP-83	TFP-83	TFP-83	TFP-83	NFCS ¹ 77-78	NFCS 77-78	TFP-83	TFP-83
TFP-R	TFP-83	Updated	TFP-83	NFCS 77-78	NFCS 87-88	TFP-83	TFP-83
TFP-PR	TFP-83	Updated	TFP-83	NFCS 77-88	NFCS 87-88	TFP-83	Recalculated

¹Nationwide Food Consumption Survey.

Table 1. Thrifty food plan, 1983: Quantities of food for a week¹

Food group	Children (years)				Males (years)				Females ² (years)		
	1-2	3-5	6-8	9-11	12-14	15-19	20-50	51+	12-19	20-50	51+
<i>Pounds³</i>											
Vegetables, fruit											
Potatoes (fresh wt)	0.47	0.82	1.04	1.11	1.29	2.22	1.50	1.55	1.27	1.16	0.90
High-nutrient vegetables	0.52	0.67	1.05	1.17	1.65	1.08	1.61	1.52	1.14	1.91	2.28
Other vegetables	0.60	0.70	0.97	1.25	1.35	1.15	1.86	1.33	1.08	2.68	2.03
Mixtures, mostly vegetables; condiments	0.01	0.02	0.05	0.07	0.02	0.06	0.13	0.06	0.07	0.02	0.02
Vitamin-C rich fruit ⁴	1.19	1.24	1.32	1.62	1.08	1.17	1.13	1.00	2.02	1.73	1.35
Other fruit ⁴	0.97	0.92	1.61	1.86	1.11	1.04	1.20	1.41	1.30	0.93	1.37
Grain products											
Whole-grain/high-fiber breakfast cereals ⁵	0.44	0.33	0.17	0.24	0.38	0.27	0.17	0.13	0.30	0.12	0.17
Other breakfast cereals	0.30	0.27	0.19	0.26	0.05	0.12	0.21	0.12	0.39	0.19	0.27
Whole-grain/high-fiber flour, meal, rice, pasta	0.11	0.14	0.12	0.11	0.20	0.22	0.15	0.21	0.16	0.15	0.18
Other flour, meal, rice, pasta	0.88	1.23	1.85	1.73	2.15	2.34	1.81	1.87	1.32	1.81	1.32
Whole-grain/high-fiber bread	0.09	0.10	0.09	0.11	0.15	0.17	0.24	0.21	0.21	0.34	0.29
Other bread	0.38	0.65	1.01	1.27	1.68	1.33	1.85	1.33	1.04	0.59	0.29
Bakery products, not bread	0.06	0.10	0.42	0.58	0.19	0.43	0.56	0.30	0.36	0.12	0.10
Grain mixtures	0.08	0.06	0.07	0.11	0.02	0.13	0.23	0.15	0.31	0.37	0.19
Milk, cheese, cream											
Milk, yogurt (qts) ⁶	3.42	3.06	3.39	4.17	3.99	3.91	2.00	1.63	4.36	2.37	2.17
Cheese	0.04	0.05	0.08	0.11	0.11	0.11	0.13	0.12	0.27	0.29	0.32
Cream, mixtures mostly milk	0.15	0.15	0.34	0.30	0.10	0.24	0.41	0.26	0.35	0.03	0.26
Meat and alternates											
Lower cost red meats, variety meats	0.93	0.69	0.70	0.92	1.20	1.49	1.40	1.73	1.75	1.60	1.95
Higher cost red meats, variety meats	0.15	0.11	0.13	0.19	0.18	0.26	0.39	0.54	0.20	0.35	0.55
Poultry	0.35	0.48	0.64	0.70	0.90	0.90	0.96	0.71	0.20	0.95	0.70
Fish, shellfish	0.02	0.02	0.02	0.03	0.03	0.02	0.04	0.04	0.04	0.04	0.04
Bacon, sausage, luncheon meats	0.18	0.32	0.31	0.24	0.26	0.27	0.56	0.49	0.24	0.45	0.45
Eggs (number)	3.00	2.90	1.90	2.50	2.20	3.10	4.10	4.30	4.10	4.40	4.10
Dry beans, peas, lentils (dry wt) ⁷	0.27	0.18	0.18	0.24	0.59	0.58	0.45	0.59	0.35	0.41	0.43
Mixtures, mostly meat, poultry, fish, egg, legume	0.05	0.06	0.01	0.01	0.02	0.03	0.13	0.15	0.20	0.13	0.15
Nuts (shelled wt), peanut butter	0.09	0.24	0.13	0.15	0.37	0.14	0.17	0.22	0.09	0.28	0.08
Other foods⁸											
Fats, oils	0.14	0.33	0.58	0.67	0.73	0.93	0.76	0.60	0.22	0.28	0.21
Sugar, sweets	0.10	0.36	0.78	0.87	1.20	0.95	1.01	0.76	0.31	0.21	0.22
Soft drinks, punches, ades (single strength)	0.39	0.57	0.65	0.87	0.87	1.51	1.17	0.32	1.12	0.40	0.38

¹Quantities are for food as purchased or brought into the household from garden or farm. Food is for preparation of all meals and snacks for a week. About 5 percent of the edible parts of food is assumed to be discarded as plate waste, spoilage, etc.

²Pregnant and lactating females usually require added nutrients.

³Quantities in pounds except milk, which is in quarts, and eggs, which are by number.

⁴Frozen concentrated juices are included as single-strength juice.

⁵Cereal fortified with iron is recommended.

⁶Quantities of dry and evaporated milk and yogurt included as their fluid whole milk equivalents in terms of calcium content.

⁷Count one pound of canned dry beans—pork and beans, kidney beans, etc.—as 0.33 pound.

⁸Small quantities of coffee, tea, and seasonings are not shown. Their cost is a part of the estimated cost for the food plan.

Source: U.S. Department of Agriculture, Human Nutrition Information Service, 1983, *The Thrifty Food Plan*, CND(Adm.) No. 365, p. 19.

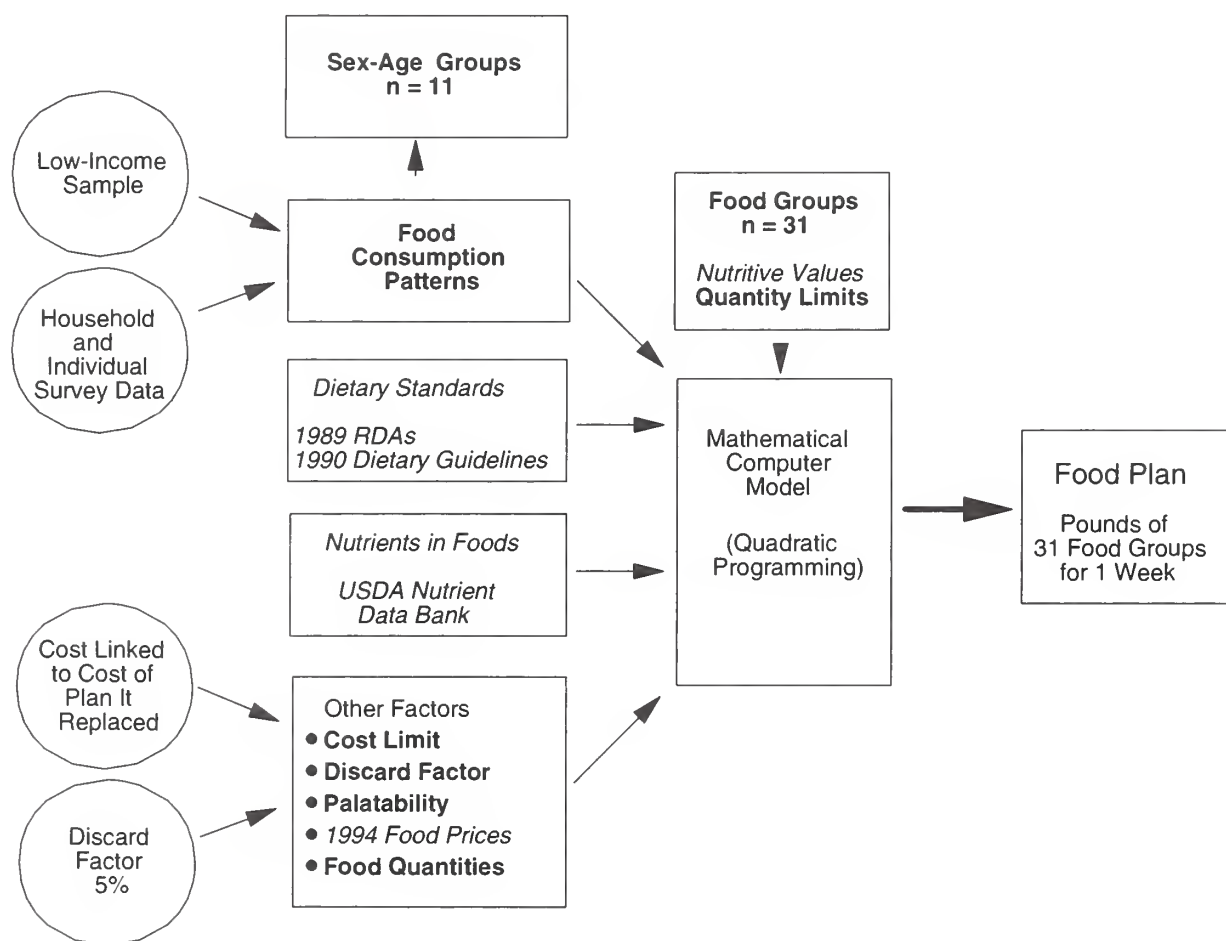
Data and Procedures Used in Evaluating the TFP

The development of the 1983 TFP included four major steps: (1) identification of food consumption patterns from USDA consumption data; (2) determination of dietary standards based on scientific information and authoritative recommendations; (3) determination

of cost limits for the plan; and (4) use of a computerized mathematical model to help develop the plan (1). This evaluation uses the same methods developed for the 1983 TFP (TFP-83) (15) but includes new dietary standards based on current recommendations (9) and updated food nutrient composition data for the analysis of food groups (11) (see figure).

The dietary standards used in TFP-83 were based on the 1980 Recommended Dietary Allowances (10). The TFP-83 provided food energy at the midpoint of the RDA and 100 percent of the RDA (1,10) for protein, vitamins, and minerals, with the exception of vitamin B-6, zinc, folate, and vitamin E. The plan used a special ratio of 0.02 mg vitamin B-6 per gram of protein and

Data and procedures used in evaluation of the 1983 thrifty food plan



Bold lettering indicates use of data from the 1977-78 Nationwide Food Consumption Survey.

Italics indicates use of data from the 1987-88 Nationwide Food Consumption Survey or other updated information.

...the TFP specifies the quantities of different types of foods (or food groups) that households may use to provide nutritious meals and snacks for household members.

80 percent of the RDA for zinc, folate, and vitamin E. Eighty percent of the RDA was used for these three nutrients because when TFP-83 was developed, the U.S. food supply did not provide sufficient zinc to meet RDA levels, and food composition data were insufficient and/or unreliable for folate and vitamin E (15). Additionally, limits were placed on total fat, cholesterol, caloric sweeteners, and sodium. These limits were based, in part, on the 1980 *Dietary Guidelines for Americans* as well as on nutritional recommendations made by other authoritative groups (1). Because the use of a computerized mathematical model necessitates setting minimum or maximum levels for all food components,

levels of these components were limited to 35 percent of total calories for total fat, 350 mg of cholesterol per day, 12 percent of calories from added caloric sweeteners, and 1,600 mg of sodium per 1,000 kcal (1).

In 1989, the RDAs were revised for several vitamins and minerals (9). Recommended amounts of vitamin B-6, calcium, magnesium, iron, and zinc changed for some sex-age categories; those of folate and vitamin B-12 were lower for all categories. Additionally, RDAs were established for vitamin K and selenium for the first time. At about the same time, quantitative limits for total fat and saturated fat as a percentage

Dietary Standards Used in the Evaluation of the 1983 TFP (TFP-R and TFP-PR)

Dietary standards were based on the 1989 Recommended Dietary Allowances (RDAs) (9) and the 1990 *Dietary Guidelines for Americans* (16). The RDAs and the Dietary Guidelines provide guidance for healthy people to use in choosing a diet that, based on current knowledge and research, will maintain and promote the health of most people. Dietary standards were established for each sex-age category. Energy was set at the average energy allowance for the appropriate sex-age category. Levels of protein, vitamins, and minerals were set at 100 percent of the RDA. Levels for vitamin K and selenium were not included in the dietary standards because food composition data on these nutrients are incomplete or not available. When there was no comparable RDA sex-age category, dietary standards were derived by interpolation of RDA values. Maximum levels (minus discard factor) for total fat, saturated fat, and cholesterol were limited to 30 percent of calories from total fat, 10 percent of calories from saturated fat, and 300 mg of cholesterol per day, respectively (8,14). No quantitative recommendations are suggested in the *Dietary Guidelines for Americans* for sugar and sodium. The dietary standards established for these components in TFP-83 were used, and no adjustments were made to the lower and upper limits of the TFP-83 consumption patterns. These "moderate" levels, which were originally defined as levels below those in the average food consumption patterns of most sex-age categories using 1977-78 NFCS data (15), were considered approximate for the exploratory nature of this analysis.

¹This calculation computes the differences of the RDA nutrient amounts between the different sex-age categories and then reapportions this difference to derive the new RDA amount for the TFP sex-age categories.

of total calories (16) and for cholesterol intake were recommended (8,14).

Dietary standards used to evaluate the TFP-83 were updated to reflect these recommendations.

For TFP-83, data from the Survey of Food Consumption in Low-Income Households, conducted as part of the NFCS 1977-78 (1), were used as the basis for classifying approximately 2,400 foods into 1 of 31 food groups (table 2). The average nutritive value or nutrient profile per pound for each of these groups was calculated by weighting the nutritive value of each food in the food group by the average number of pounds reported as used by the survey households. Food composition data for these calculations were from USDA's Nutrient Data Bank (1,11).

As part of TFP-R and TFP-PR, the nutritive profile of each food group in TFP-83 was updated using food items reported by low-income households in NFCS 1987-88. Food items that had been reported as used by households in 1977-78 NFCS were matched with similar items from the 1987-88 NFCS household component. Each item was identified by a household code and linked to the most current nutrient values from USDA's Nutrient Data Base specific to that food code. In the event that a household food code used in the 1977-78 NFCS did not appear in the 1987-88 household food code, either a food item similar in nutrient composition was substituted, or if the food item was consumed in negligible amounts, that food code was excluded from the food group.

The majority of the few codes excluded were foods of Puerto Rican origin. Each household code was placed in 1 of the

31 food plan food groups, and the average nutritive value per pound was recalculated for each group to reflect the current data. The nutritive value of each food in the food group was weighted by the average number of pounds reported as used by the NFCS 1977-78 survey households.

The recalculated nutritive profile of several food groups differed in the level of calories and of specific nutrients from the nutritive profile for the same groups in the TFP-83. These differences reflect the changes in food composition data due to technological developments, marketing practices, and improved analytical methods that occurred between the 1977-78 and 1987-88 surveys. For example, technological advances since the late 1970's increased the number of food items in bakery, cereal, fruit juice and drink, and milk product food groups with nutrients added through fortification and enrichment.

Different marketing practices altered the nutrient contributions of many grain, vegetable, and meat mixtures. Sweeteners and fat added to enhance the flavor of these mixtures contributed more calories and fat to the diet from these foods than previously calculated. Also, new or improved analytical methods provided more accurate data on several nutrients or dietary components. For example, the decrease in the level of cholesterol in the plan can be attributed to new analytical methods used to determine the nutrient composition of eggs (4). Additionally, since the 1977-78 NFCS, USDA's Nutrient Data Bank has expanded the survey data base to include nutrients previously omitted because of limited data.

With the exception of magnesium, the nutritive value of food in TFP-R exceeded the dietary RDA standards originally specified in TFP-83.

Table 2. Food groups for USDA thrifty food plan¹

Food group	Food included
Potatoes	White potatoes, dehydrated potatoes, mixtures, mostly potato
High-nutrient vegetables ²	Asparagus, bean sprouts, broccoli, brussels sprouts, cabbage, carrots, cauliflower, green peppers, leafy greens, okra, pumpkin, sauerkraut, summer and winter squash, sweet potatoes, tomatoes, turnips; tomato and vegetable juices
Other vegetables	All other vegetables including artichokes, beets, celery, corn, cucumbers, eggplant, lettuce, lima beans, mushrooms, onions, parsnips, peas, radishes, rutabagas, snap beans
Mixtures, mostly vegetables; condiments	Catsup, chili sauce, barbecue sauce; tomato and cucumber pickles and relishes; olives; potato chips, sticks; other mixtures, mostly vegetables
Vitamin-C rich fruit	Cantaloupe, grapefruit, honeydew melon, lemons, limes, mangoes, oranges, persimmons, papayas, strawberries, tangelos, tangerines; citrus and citrus-blend juices
Other fruit	All other fruit including apples, apricots, bananas, berries, cherries, dried fruit, grapes, nectarines, peaches, pears, pineapple, plums, watermelon
Whole-grain/high-fiber breakfast cereals	Oatmeal, bran cereal, wheat germ, shredded wheat, granola type, puffed oats, other breakfast cereals made from whole or high-fiber grains
Other breakfast cereals	Farina, ready-to-eat cereal other than those made from whole or high-fiber grains
Whole-grain/high-fiber flour, meal, rice, pasta	Whole wheat, buckwheat, soy, barley, rye, millet, peanut, carob, triticale flours and meal; mixes made from whole-grain/high-fiber flours; whole-ground cornmeal; whole-wheat pasta; popcorn; brown rice; leavenings
Other flour, meal, rice, pasta	White enriched flour, mixes made from white enriched flour, leavenings, degermed cornmeal, white enriched rice, grits, enriched pasta
Whole-grain/high-fiber bread	Whole wheat, pumpernickel, bran, rye, oatmeal, triticale breads, rolls, muffins, pancakes
Other bread	White enriched bread, rolls, muffins, bagels, biscuits, pancakes, waffles; cornbread; tortillas
Bakery products, not bread	Enriched and unenriched cakes, pies, tarts, cobblers, crackers, cookies, pastries, doughnuts, pretzels, corn and wheat snacks
Grain mixtures	Soups, mostly grain; pizza; macaroni salad; egg rolls; Spanish rice; macaroni and cheese; spaghetti with tomato sauce; other pasta mixtures and plate meals
Milk, yogurt	Whole milk, lowfat milk, skim milk, buttermilk, nonfat dry milk, imitation milk and formulas, evaporated milk, yogurt, chocolate milk, cocoa with nonfat dry milk
Cheese	Cheddar, swiss, cottage, other cheeses, imitation cheese, cheese dips, cheese fondue

Food group	Food included
Cream, mixtures mostly milk	Cream, half and half, sour cream, eggnog, nondairy creamers, puddings, ice cream, ice milk, milkshakes, other frozen desserts, sweetened liquid meal supplements, milk-based soups
Lower cost red meats, variety meats ³	Ground beef and pork, beef chuck roast and steak; fresh and cured pork shoulder and boston butt; beef and lamb stew meat; canned corned beef, roast beef; chipped beef; organ meats such as liver, heart, kidney
Higher cost red meats, variety meats ³	Most beef and veal steaks and roast; cured ham, boiled ham, spareribs, pork loin roast, pork chops; lamb chops, steaks, roast; variety meats such as brains, tongue, chitterlings
Poultry	Raw and processed chicken, turkey, and other poultry
Fish, shellfish	Raw and processed cod, perch, haddock, sole, and other fish; breaded fish portions and sticks; canned tuna, sardines, and other fish; raw and processed crab, lobster, clams, shrimp, and other shellfish
Bacon, sausage, luncheon meats	Bacon, salt pork, sausage; frankfurters, bologna, salami, liverwurst, other luncheon meats; fatback and other fatty meats; bacon and sausage substitutes
Eggs	Eggs, egg substitutes
Dry beans, peas, lentils	Dry beans of all kinds; dry peas; lentils; soybeans and soya products
Mixtures, mostly meat, poultry, fish, egg, legume	Soups and mixtures, mostly meat, poultry, fish, egg, or legume (plate dinners, entrees such as hamburgers, corned beef hash, chili con carne, chicken and tuna salad, pot pies, fish cakes, egg foo yung, beans and franks, etc.)
Nuts, peanut butter	Peanuts, tree nuts, peanut butter and other nut butters, seeds
Fats, oils	Butter, margarine, hydrogenated vegetable fat, lard, cooking oil, salad dressings
Sugar, sweets	Sugar, granulated, powdered, brown, maple; molasses syrup; honey, jams; jellies; preserves; powdered dessert mixes and prepared desserts; candy; fruit ices; chocolate syrup and topping; sugar substitutes
Seasonings ⁴	Salt, seasoning, vinegar, extracts, spices, plain cocoa, baking chocolate
Soft drinks, punches, ades	Soft drinks, regular and diet; fruit ades, punches, drinks, nectars
Coffee, tea ⁴	Coffee, tea

¹Cost, nutrient composition, and use in meals are considered in grouping foods.

²Systematically selected for their relatively high nutrient-to-calorie ratios and content per serving of vitamin A, vitamin B-6, ascorbic acid, iron, and magnesium.

³Selected by their relative costs per unit of protein.

⁴Quantities of coffee, tea, and seasonings are not shown in quantities of food for a week tables, but their cost is part of the estimated cost of the food plan.

Table 3. Nutritive value¹ of food in the 1983 thrifty food plan (TFP-83) as a percent of 1980 RDAs²

Food component	Children (years)				Males (years)				Females (years)		
	1-2	3-5	6-8	9-11	12-14	15-19	20-50	51+	12-19	20-50	51+
<i>Percentage of Recommended Dietary Allowance (1980)³</i>											
Protein	238	204	202	200	202	165	159	155	182	196	186
Vitamin A	214	189	167	159	138	126	143	131	172	189	213
Thiamin	194	181	148	158	149	150	149	156	179	176	162
Riboflavin	237	207	171	175	155	150	144	145	205	176	173
Niacin	290	281	218	224	232	232	235	251	276	306	285
Vitamin B-6 ⁴	154	114	95 ⁵	100	101	95 ⁵	85 ⁵	82 ⁵	97 ⁵	94 ⁵	96 ⁵
Vitamin B-12 ⁴	205	155	128	149	156	176	156	164	209	168	190
Folate ⁴	263	156	103	97 ⁵	90 ⁵	86 ⁵	91 ⁵	84 ⁵	94 ⁵	92 ⁵	89 ⁵
Vitamin C	143	152	174	201	170	143	151	130	186	176	171
Vitamin E ⁴	80 ⁵	104	123	144	144	123	118	102	80 ⁵	97 ⁵	82 ⁵
Calcium	100	100	120	120	100	103	115	100	100	113	104
Iron	90 ⁵	115	151	136	116	123	209	194	105	100	171
Magnesium ⁴	160	129	112	110	119	100	104	101	115	118	104
Phosphorus	144	148	168	165	153	162	203	197	143	201	188
Zinc	80 ⁵	80 ⁵	85 ⁵	84 ⁵	80 ⁵	82 ⁵	80 ⁵	80 ⁵	80 ⁵	80 ⁵	80 ⁵
<i>Composition of diet</i>											
Food energy (kcal)	1300	1600	2100	2400	2700	2800	2700	2400	2100	2000	1800
Cholesterol ⁴ (mg)	230	230	220	270	270	330	350	350	250	350	350
Sodium ⁴ (mg)	1600	1900	2300	2700	3000	3700	4000	3000	3100	3000	2300
<i>Percentage of energy</i>											
Total fat	32	35	34	34	34	35	35	35	32	35	35
Protein	17	14	12	13	14	13	13	15	16	17	18

¹Nutritive value of the edible portion of food as purchased, adjusted to allow for losses in cooking for vitamins, except folate. One-half of the drippings and trimmable fat from meat, poultry, and fish was assumed as discard.

²Nutritive value per pound of food groups is based on the average quantities of foods used by a special group of about 4,400 low-income households (eligible for the Food Stamp Program) surveyed November 1977–March 1978 as part of the Nationwide Food Consumption Survey 1977-78.

³RDA derived for specified sex-age categories by interpolation.

⁴Based on limited food composition data.

⁵Although the plan failed to provide the RDA, it met standards specified for the plan.

Source: U.S. Department of Agriculture, Human Nutrition Information Service, 1983, *The Thrifty Food Plan*, CND(Adm.) No. 365, p. 25.

Is the 1983 TFP Nutritionally Adequate?

To determine the nutritional adequacy of TFP-R, the recalculated nutritive value for each food group was multiplied by the food group quantity

specified in TFP-83 (table 1) for each of the 11 sex-age categories. These values were then compared with the revised dietary standards to determine the nutritional adequacy of the consumption pattern of a particular sex-age category.

With the exception of magnesium, the nutritive value of food in TFP-R exceeded the dietary RDA standards originally specified in TFP-83 (tables 3 and 4). Values for zinc, vitamin B-6, and vitamin E, which did not meet 100

Table 4. Nutritive value¹ of food in the 1983 thrifty food plan review (TFP-R) as a percent of 1989 RDAs²

Food component	Children (years)				Males (years)				Females (years)		
	1-2	3-5	6-8	9-11	12-14	15-19	20-50	51+	12-19	20-50	51+
<i>Percentage of Recommended Dietary Allowance (1989)³</i>											
Protein	375	297	261	245	214	168	149	139	206	186	171
Vitamin A	262	236	210	199	180	160	180	160	213	237	265
Thiamin	223	207	187	197	180	158	155	168	205	177	174
Riboflavin	286	221	200	223	197	167	154	159	247	185	195
Niacin	186	167	149	162	153	130	141	162	159	158	164
Vitamin B-6	164	150	127	142	122	110	108	98	154	135	133
Vitamin B-12	886	593	403	409	357	390	342	351	448	362	412
Folate	547	407	295	294	238	176	179	152	231	195	184
Vitamin C	234	237	226	291	242	224	221	180	281	239	222
Vitamin E	107	118	140	146	137	136	126	106	105	110	96
Calcium	127	125	148	151	121	120	120	113	125	123	124
Iron	147	149	158	169	179	183	217	190	135	121	171
Magnesium	302	239	182	160	146	100	98	90	121	119	102
Phosphorus	156	160	182	183	160	162	183	189	154	182	185
Zinc	91	89	95	103	87	91	85	84	114	107	108
<i>Composition of diet</i>											
Food energy (kcal)	1400	1700	2300	2600	2900	3000	2900	2600	2400	2200	2000
Cholesterol (mg)	210	220	230	270	280	330	340	280	340	340	340
Sodium (mg)	1600	2000	2600	3000	3200	4000	4200	3100	3400	3300	2500
<i>Percentage of energy</i>											
Total fat	33	34	33	34	34	35	36	37	32	35	37
Saturated fat	13	12	12	12	11	12	12	12	13	13	14
Protein	17	14	12	13	13	13	13	14	16	16	17

¹Nutritive value of the edible portion of food as purchased, adjusted to allow for losses in cooking for vitamins, except folate. One-half of the drippings and trimmable fat from meat, poultry, and fish was assumed as discard.

²Nutritive value per pound of food groups is based on the average quantities of foods used by about 4,400 low-income households eligible for the Food Stamp Program surveyed November 1977–March 1978 as part of the Nationwide Food Consumption Survey 1977-78.

³RDA derived for specified sex-age categories by interpolation.

percent of the revised dietary standard for some sex-age categories, met a higher percentage of the dietary standard than in TFP-83. For several of the sex-age categories, the TFP-R contained more calories than did the TFP-83. These

additional calories reflect the updated food composition data used to recalculate the nutritive values for the food groups used in the TFP-R and TFP-PR. Overall, the improved nutritive value seen in TFP-R, compared with that in

TFP-83, reflects the decrease in RDA values between the 1980 and the 1989 editions for several nutrients—particularly, vitamin B-6 and zinc for selected sex-age groups—and more reliable and up-to-date food composition data.

This study shows that the TFP-83 does not meet current nutritional recommendations for several nutrients and dietary components.

Although the nutritive value of TFP-R was much improved over that of TFP-83 in terms of RDA, the TFP-R contained 100 to 300 more calories than TFP-83, and the levels of total fat and saturated fat for each of the 11 sex-age categories failed to meet current dietary guidance. In addition, fat levels for males 20-50 years of age and males and females 51 years of age and older exceeded the 1983 standard of 35 percent or less of total calories. No standard for saturated fat was established for TFP-83 so a comparison of saturated fat values in TFP-R and TFP-83 was not attempted.

Cholesterol levels for all sex-age groups in TFP-R fell below the TFP-83 standard of 350 mg per day (table 4), with six of the sex-age groups falling below 300 mg per day. TFP-R sodium levels ranged from 1,100 to 1,500 mg per 1,000 kcal for the sex-age groups. Although the standard of 1,600 mg per 1,000 kcal is met, the caloric increase in the TFP-R's nutritive value contributed to an overall increase in sodium for all sex-age categories, except children 1-2 years old.

Can a TFP Be Developed That Meets Dietary Recommendations at Current Cost Level?

For the TFP-PR, a computerized mathematical model was used to generate a practical and acceptable consumption pattern for each of the 11 sex-age categories. This model, which was used in the development of TFP-83 (1,15), minimizes the changes that households need to make in consumption patterns to meet the goal of obtaining a nutritious diet at the current cost level. Dietary standards used in TFP-83 (1,15) were updated in the model to reflect the 1989 RDAs and to include additional constraints for fat, saturated fat, and

cholesterol. Recalculated nutritive values for the 31 food groups based on the 1987-88 NFCS and USDA's Nutrient Data Bank data were used to update the nutritive value of foods in the consumption patterns of the TFP-83. No other data modifications were made to TFP-83, and average unit costs of each food group were held constant. The model compared the updated nutritive values to the revised dietary standards and made any necessary adjustments in the consumption patterns. Thus, the optimum food plan (quantities of the 31 food groups for a week) that met dietary standard constraints at the current cost was selected for each sex-age category.

The TFP-PR generated by the model illustrates a possible and practical consumption pattern for each of the 11 sex-age groups (table 5). Current dietary standards are met for all nutrients and dietary components except zinc, for five sex-age categories (table 6). Although not a complete revision of TFP-83, TFP-PR represents a link of 1977-78 NFCS consumption data with up-to-date food composition information and food codes from the 1987-88 NFCS. This step is useful in determining the feasibility of generating a new TFP using current dietary recommendations. This plan is not currently used by the U.S. Department of Agriculture but represents the results of exploratory research on food plan development.

Several shifts in food group quantities are apparent when comparing the TFP-PR and TFP-83. In the development of TFP-83, minimum and maximum quantities that could be included in the food plan were predetermined (15). Such limits helped to assure that the food plan would be practical as a basis for meal preparation. In TFP-83, the lower and upper limits were based on

Table 5. Thrifty food plan, partial revision (TFP-PR): Quantities of food for a week¹

Food group ²	Children (years)				Males (years)				Females ³ (years)		
	1-2	3-5	6-8	9-11	12-14	15-19	20-50	51+	12-19	20-50	51+
<i>Pounds⁴</i>											
Vegetables, fruit											
Potatoes (fresh wt)	0.47	1.78	1.14	1.18	1.29	2.33	2.09	3.37	1.58	2.24	1.79
High-nutrient vegetables	0.52	1.40	1.08	1.23	1.65	1.08	1.61	3.17	1.78	2.33	3.77
Other vegetables	0.60	0.73	1.02	1.32	1.35	1.15	1.86	2.51	1.54	2.73	2.44
Mixtures, mostly vegetables; condiments	0.01	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.01	0.02	0.02
Vitamin-C rich fruit ⁵	1.20	1.24	1.35	1.72	1.08	1.17	1.13	1.00	2.25	1.73	1.35
Other fruit ⁵	0.97	0.92	1.61	1.91	1.11	1.04	1.20	1.41	1.41	0.93	1.37
Grain products											
Whole-grain/high-fiber breakfast cereals ⁶	0.44	0.42	0.39	0.41	0.53	0.43	0.23	0.15	0.30	0.12	0.17
Other breakfast cereals	0.26	0.67	0.52	0.63	0.85	0.42	0.37	0.24	0.49	0.19	0.27
Whole-grain/high-fiber flour, meal, rice, pasta	0.11	0.15	0.12	0.09	0.20	0.27	0.19	0.22	0.16	0.15	0.18
Other flour, meal, rice, pasta	0.09	1.37	1.29	1.14	1.95	3.08	2.30	2.20	1.71	1.81	2.03
Whole-grain/high-fiber bread	0.01	0.24	0.12	0.14	0.34	0.17	0.27	0.45	0.24	0.34	0.29
Other bread	0.16	0.24	0.75	0.94	1.30	1.43	2.26	0.46	1.12	1.13	0.29
Bakery products, not bread	0.06	0.06	0.14	0.20	0.19	0.17	0.15	0.13	0.14	0.12	0.10
Grain mixtures	0.02	0.01	0.14	0.21	0.02	0.29	0.30	0.02	0.35	0.41	0.01
Milk, cheese, cream											
Milk, yogurt (qts) ⁷	5.21	3.25	3.20	3.45	3.13	4.64	2.55	1.27	3.42	1.68	1.54
Cheese	0.03	0.04	0.08	0.11	0.11	0.11	0.09	0.06	0.07	0.08	0.09
Cream, mixtures mostly milk	0.02	0.02	0.05	0.04	0.04	0.07	0.05	0.03	0.03	0.03	0.03
Meat and alternates											
Lower cost red meats, variety meats	1.08	0.92	0.70	0.92	1.81	1.49	2.23	2.18	1.38	1.60	1.95
Higher cost red meats, variety meats	0.33	0.11	0.30	0.19	0.18	0.26	0.31	0.24	0.20	0.35	0.18
Poultry	0.04	0.06	0.70	0.70	0.90	0.90	0.21	0.08	0.20	0.95	0.46
Fish, shellfish	0.02	0.02	0.21	0.35	0.03	0.02	0.04	0.33	0.04	0.04	0.04
Bacon, sausage, luncheon meats	0.18	0.18	0.24	0.23	0.26	0.27	0.33	0.23	0.24	0.22	0.20
Eggs (number)	1.43	1.43	2.24	2.45	1.91	3.34	4.46	3.70	3.93	5.13	2.29
Dry beans, peas, lentils (dry wt) ⁸	0.27	0.29	0.21	0.24	0.71	0.47	0.73	0.88	0.37	0.42	0.42
Mixtures, mostly meat, poultry, fish, egg, legume	0.01	0.01	0.09	0.10	0.02	0.02	0.02	0.02	0.13	0.13	0.01
Nuts (shelled wt), peanut butter	0.04	0.07	0.05	0.01	0.15	0.10	0.34	0.21	0.05	0.16	0.04
Other foods⁹											
Fats, oils	0.13	0.14	0.18	0.21	0.23	0.38	0.39	0.38	0.20	0.28	0.21
Sugar, sweets	0.10	0.17	0.83	0.94	0.38	0.66	0.64	0.29	0.25	0.21	0.22
Soft drinks, punches, ades (single strength)	0.16	0.23	0.65	0.87	0.35	1.51	1.17	0.13	1.12	1.01	0.15

¹Quantities are for food as purchased or brought into the household from garden or farm. Food is for preparation of all meals and snacks for a week. About 5 percent of the edible parts of food is assumed to be discarded as plate waste, spoilage, etc.

²See table 2 for foods in food groups.

³Pregnant and lactating females usually require added nutrients.

⁴Quantities in pounds except milk, which is in quarts, and eggs, which are by number.

⁵Frozen concentrated juices are included as single-strength juice.

⁶Cereal fortified with iron is recommended.

⁷Quantities of dry and evaporated milk and yogurt included as their fluid whole milk equivalents in terms of calcium content.

⁸Count one pound of canned dry beans—pork and beans, kidney beans, etc.—as 0.33 pound.

⁹Small quantities of coffee, tea, and seasonings are not shown. Their cost is a part of the estimated cost for the food plan.

Table 6. Nutritive value¹ of food in the partial revision of the thrifty food plan (TFP-PR) as a percent of 1989 RDAs²

Food component	Children (years)				Males (years)				Females (years)		
	1-2	3-5	6-8	9-11	12-14	15-19	20-50	51+	12-19	20-50	51+
<i>Percentage of Recommended Dietary Allowance (1989)³</i>											
Protein	377	287	255	221	214	180	166	137	181	174	146
Vitamin A	271	346	230	211	206	167	187	249	241	258	347
Thiamin	189	250	201	200	220	196	184	174	216	187	185
Riboflavin	305	249	211	215	223	197	178	155	221	174	173
Niacin	150	200	174	178	198	159	166	172	167	169	176
Vitamin B-6	151	215	164	169	181	134	127	135	161	143	139
Vitamin B-12	1046	671	464	436	445	429	432	379	362	323	343
Folate	516	532	371	344	329	211	220	194	248	207	198
Vitamin C	229	294	281	323	265	242	234	251	320	277	263
Vitamin E	100	100	106	101	100	101	106	100	100	104	100
Calcium	151	124	130	122	100	133	133	100	100	100	100
Iron	121	192	190	191	239	223	258	216	144	130	190
Magnesium	307	258	184	150	140	106	113	105	117	120	112
Phosphorus	163	162	170	158	149	179	208	189	134	165	163
Zinc	95	97	100	100	99	100	100	88	100	100	95
<i>Composition of diet</i>											
Food energy (kcal)	1300	1600	1900	2100	2500	3000	2900	2300	2200	2200	1900
Cholesterol (mg)	190	150	200	230	240	300	300	250	250	300	210
Sodium (mg)	1400	1900	2600	3000	3100	3500	3600	2700	3200	3200	2600
<i>Percentage of energy</i>											
Total fat	38	25	26	26	28	27	30	30	26	30	28
Saturated fat	17	10	10	10	10	10	10	10	10	10	10
Protein	19	15	14	14	15	14	14	15	15	15	15

¹Nutritive value of the edible portion of food as purchased, adjusted to allow for losses in cooking for vitamins. One-half of the drippings and trimmable fat from meat, poultry, and fish was assumed as discard.

²Nutritive value per pound of food groups is based on the average quantities of foods used by about 4,400 low-income households eligible for the Food Stamp Program surveyed November 1977–March 1978 as part of the Nationwide Food Consumption Survey 1977–78.

³RDA derived for specified sex-age categories by interpolation.

the 25th and the 90th percentiles on distributions of the food group quantity used per person by survey households. These same cut-offs were used for the TFP-PR. These limits not only assured practical consumption patterns but also restricted the use of foods such as salt

and seasonings, soft drinks, punches and ades, and coffee and tea. Shifts in food group quantities that occurred from TFP-83 to TFP-PR were constrained by the minimum and maximum limits set for TFP-83; however, these shifts showed the direction of change

needed to meet the dietary standards is towards food groups with nutrient-dense foods. For example, quantities of potatoes, high-nutrient vegetables, other vegetables, breakfast cereals, and pasta products were higher, and quantities of cream and fats and oils were lower in

the consumption patterns for some sex-age categories (tables 1 and 5).

The TFP-PR generated by the model represents a solution at the current cost level of TFP-83. The cost of TFP-83 established at the time of development (prices paid by survey households in the 1977-78 NFCS) has been updated monthly by USDA to reflect current prices paid for food using the Consumer Price Index (CPI) for detailed food expenditure categories. The CPI is based on prices collected each month by the Bureau of Labor Statistics.

Zinc in TFP-R and TFP-PR

In both components of the evaluation, zinc was identified as the nutrient least likely to meet 100 percent of the RDA. USDA applies the RDAs as a standard because they recommend a level of intake of specific nutrients designed to ensure that the needs of most healthy people are met (9). Although the zinc levels did not meet 100 percent of the dietary standard for all sex-age groups, the levels in both components of this evaluation were consistent with intakes by Americans. Zinc levels in the TFP-R and in TFP-PR were at least 84 and 88 percent, respectively, of the RDA (tables 4 and 6)—and better, in many cases, than observed consumption levels in American diets (7,13). In addition, the dietary changes associated with reducing total fat, saturated fat, and cholesterol are likely to negatively affect the zinc content of the diet (3). To ensure adequate amounts of zinc in the revision of the plan, emphasis needs to be placed on incorporating a variety of food items (such as grains, legumes, more fruits and vegetables, and lower fat dairy products) that are higher in zinc but lower in fat than are included in the 1983 TFP.

Summary of Findings and Implications for Research

This study shows that the TFP-83 does not meet current nutritional recommendations for several nutrients and dietary components. Additionally, it identifies several limitations of this plan. These limitations include out-of-date consumption and cost data from 1977-78, dietary standards based on old (1980) RDAs, the exclusion of the limits contained in the most recent (1990) version of the *Dietary Guidelines for Americans* from the dietary standards, and incomplete and out-of-date food composition data. Concern about the quality of data from the 1987-88 NFCS and the absence of an alternative data source to revise the plan have been the major limitations to updating the TFP-83. Linking the food stamp allotment to a plan based on such data may not be defensible or acceptable.

This evaluation is presented as a first step in the revision process of the 1983 TFP. Although exploratory, it is valuable because it shows that a plan (TFP-PR) at the current cost level of TFP-83 can be generated that meets nutritional recommendations for all nutrients except zinc. These findings will be used by USDA to identify the data needs and to determine the steps necessary to revise the 1983 TFP. This process is currently underway by the Center for Nutrition Policy and Promotion (CNPP), the responsible lead for the development of USDA Family Food Plans.

CNPP and several other USDA agencies are developing strategies and a work plan for revision of the 1983 TFP. Discussion is focused on obtaining and incorporating several types of data into the revision process. These include updated survey data on household and individual consumption behaviors and food prices paid by households for food consumed; the most recent RDAs as well as the forthcoming *Dietary Guidelines for Americans* and Food Guide Pyramid serving recommendations; updated food composition data and access to food grouping systems for classification of foods (including mixtures) into appropriate groups; and menu and recipe planning software to assist with the production of educational materials that offer a variety of foods to low-income consumers.

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Income and Spending of Rural Single-Parent Families

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In examining the economic status of single-parent families, the tendency has been to aggregate rural and urban families. This study examines the characteristics, income, and spending of single-parent families in the two areas separately using data from the 1990-92 Consumer Expenditure Survey. A significantly higher proportion of urban than rural single parents were never married. Slightly over one-fourth of single parents in both areas did not have a high school diploma. A significantly greater percentage of rural than urban single-parent families received alimony and child support, but a smaller percentage received public assistance. Before-tax income of rural families was significantly lower compared with urban families (\$16,060 vs. \$18,430). Housing accounted for the largest share of total expenses for both groups. A significantly higher proportion of rural than urban single-parent families owned a home, with 29 percent of all rural single-parent families residing in a mobile home. These results can give policymakers and professionals who develop programs targeted to single-parent families a better understanding of the differences in the two groups.

Single-parent families are a growing proportion of all families with children. In 1970, 13 percent of all family groups with children under age 18 were maintained by a single parent. By 1993, this figure had climbed to 30 percent (9). Families maintained by one parent are one of the more economically vulnerable groups in the population (13). Previous research has examined the economic situation of single-parent families by various characteristics. For a review of this research see (5). One aspect that has received little attention is rural residency; the tendency has been to aggregate rural and urban families. However, because social and economic conditions between the two

areas differ (2), the economic well-being of rural and urban single-parent families would be expected to differ. Although a lower proportion of children in nonmetro versus metro areas reside with only one parent, the percentages have been rising in both areas (10).

To delineate economic differences between rural and urban single-parent families, this study examines the characteristics, income, and spending of these families. Findings concerning the economic situation of rural and urban single-parent families can give policymakers and professionals who develop programs targeted to single-parent families a better understanding of the differences in the two groups.

About one in four single parents in both areas did not have a high school diploma.

Data

Data for this study are from the 1990-92 Consumer Expenditure Survey (CE), conducted by the Bureau of Census for the Bureau of Labor Statistics. The CE is an ongoing study that collects data on expenditures, income, and major sociodemographic characteristics of consumer units. In this study, the terms consumer unit, family, and household will be used interchangeably. A national sample of consumer units, representing the civilian, noninstitutionalized population, is interviewed over four consecutive quarters.

There is a rotating sample design such that each quarter a portion of the sample consists of new consumer units introduced to replace consumer units who complete their participation in the survey. Each quarter is deemed an independent sample and should be treated as such to incorporate the weights. Data from 12 quarters were therefore aggregated and expenditures annualized for this study. The 1990-92 survey contains information from about 60,000 interviews (5,000 interviews per quarter).

Families maintained by single parents with at least one child under age 18 in the home were selected for analysis. Households were composed of parents and children only. Those with extended family members or nonfamily members, such as grandparents or cohabiting partners, were not included because single-parent families living with others are not always identifiable in the data, and families living with others do not represent the typical family type of interest. An estimated 72 percent of single-mother families are composed of parents and children only (15) (figures are not available for single-father families).

The unweighted sample consisted of 261 single-parent families residing in rural areas and 3,642 single-parent families residing in urban areas. Rural areas are defined as places of less than 2,500 people outside a Metropolitan Statistical Area (MSA); all places within an MSA and places of 2,500 or more people outside an MSA are classified as urban. For income, only data from consumer units that were classified as complete income reporters were used. Complete income reporters are consumer units that provide values for major sources of income such as wages and salary, self-employment income, and Social Security. About 86 percent of rural and urban single-parent families were complete income reporters. Data were weighted to obtain population estimates. Tests of significance (Chi-square and t-tests), however, were performed on the unweighted data and reported at the .01 level. The .01 level of statistical significance was selected rather than the more traditional .05 level to compensate for any possible clustering effect present in the data.

Characteristics

Average age of rural single parents was slightly, but significantly, older than that of urban single parents (38 vs. 35 years) (table 1). Average family size was similar between families in the two areas (2.8 and 2.9) denoting an average of two children. Twelve percent of rural single parents and 10 percent of urban single parents were male, a nonsignificant difference.

No significant difference in educational level of single parents was observed between the two groups. About one in four single parents in both areas did not have a high school diploma. This

Table 1. Selected characteristics of single-parent families by rural-urban residence, 1990-92

Characteristic	Rural	Urban
Average age of parent (years)*	38	35
Average family size	2.8	2.9
Parent	<i>Percent</i>	
Sex		
Female	88	90
Male	12	10
Education		
No high school diploma	27	26
High school diploma	33	36
1 - 3 years of college	28	27
4 years of college or more	12	11
Race*		
White	84	64
Non-White	16	36
Marital status*		
Divorced/separated	79	69
Never married	11	26
Widowed	10	5

*Statistically significant at $p \leq .01$ based on unweighted data.

Income

Wages or salary was the income source most likely to be received by single-parent families in rural and urban areas (table 2, p. 20). Eighty-four percent of rural and 73 percent of urban single-parent families had wage or salary income, a significant difference. There was also a significant difference in employment status between rural and urban single parents (fig. 1, p. 20).¹ A significantly higher proportion of rural than urban single parents worked part time.² This has been attributed to the nature of employment available in nonmetro/rural areas. Opportunities for women are thought to be more restricted in rural areas, reflecting more traditional expectations of women (6).

For rural families, alimony/child support/regular contributions³ was the second most likely received income source (39 percent), whereas food stamps was the second most likely received source by urban families (36 percent). Alimony/child support/regular contributions was received by a significantly lower percentage of urban single-parent families (31 percent) than rural families. The higher percentage of rural

¹Although 80 percent of rural single-parent families had an employed parent, 84 percent had wage or salary income. In some families, it may be an older child and not the single parent who is employed. Also, some parents may work only a small part of the year and not view themselves as employed.

²Full-time, year-round employment is defined as working 35 or more hours per week, 50 or more weeks per year, including any time off with pay. Part-time employment is defined as working less than 35 hours per week or less than 50 weeks per year, including any time off with pay.

³These three income sources were combined in the CE public use tape; regular contributions are periodic payments from a nongovernment, non-household source, such as extended family.

relatively low educational level has implications for the job prospects (and thus, income) of these people.

With regard to race and marital status, there were significant differences between single parents in the two areas. A much lower percentage of single parents in rural compared with urban areas were non-White (16 vs. 36 percent), reflecting the lower percentage of non-Whites overall in rural areas (1).

Eleven percent of rural single parents were never married, compared with 26 percent of urban single parents. Rogers states that one of the factors associated with rural living is a more traditional attitude about families (10). So, while divorce may be increasingly acceptable in rural areas, a birth to a never-married woman probably is less so.

single parents receiving income from this source may be because more of these people were divorced or separated rather than never married. Divorced or separated women may receive a child support award from the court at the time of the divorce or legal separation; never-married women usually need to initiate legal proceedings—and many do not.

The percentage of rural and urban single-parent families receiving income from alimony/child support/regular contributions may appear low, especially since child support is included and these families had at least one child under age 18 in the home. Many single parents with children, however, are not awarded child support—and when it is awarded, the full amount due is often not paid (3).

A significantly lower proportion of rural than urban single-parent families received income from public assistance (14 vs. 29 percent), such as Aid for Families with Dependent Children, and food stamps (24 vs. 36 percent; the value of food stamps received was included as income). Receipt of these two sources of income is likely inversely related to receipt of child support. Child support payments reduce the need to depend on government assistance to meet expenses. A small proportion of both rural and urban families received income from Social Security and interest or dividends; there was no significant difference between the two groups of single-parent families in terms of these two income sources. Social Security is paid to widowed single parents since under the Social Security system, a household with a dependent child from a deceased parent is eligible for survivors' benefits.

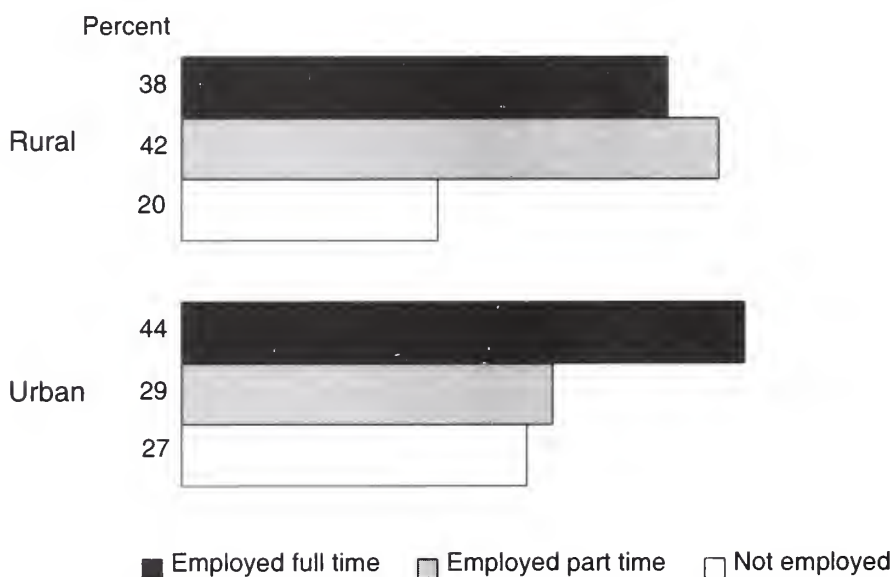
Table 2. Percentage of single-parent families with income source by rural-urban residence, 1990-92

Income source	Rural	Urban
Wages or salary	84	73*
Alimony/child support/regular contributions	39	31*
Public assistance	14	29*
Interest or dividends	12	14
Food stamps	24	36*
Social Security	10	6
Other ¹	28	20*

¹ Includes income from pensions, Supplemental Security Income, unemployment compensation, or owned businesses.

*Statistically significant at $p \leq .01$ based on unweighted data.

Figure 1. Employment status of single parents by rural-urban residence, 1990-92*



*Statistically significant at $p \leq .01$ based on unweighted data.

Table 3. Income of single-parent families by rural-urban residence, 1990-92

	Rural	Urban
Before-tax income	\$16,060	\$18,430*
Per capita	5,740	6,360*
After-tax income	15,460	17,330*
Per capita	5,520	5,980*
<i>Percent of before-tax income</i>		
Wages and salary	70	73*
Alimony/child support/ regular contributions	11	6
Public assistance	3	7*
Interest and dividends	2	1
Food stamps	3	5*
Social Security	2	2
Other ¹	9	6

¹ Includes income from pensions, Supplemental Security Income, unemployment compensation, and owned businesses.

*Statistically significant at $p \leq .01$ based on unweighted data.

Public assistance and food stamps composed significantly smaller amounts of before-tax income for rural than urban families.

Average before-tax income of rural single-parent families was 13 percent lower, a significantly different amount, than that of their urban counterparts (\$16,060 vs. \$18,430) (table 3). Per capita income was also significantly lower, but by a smaller amount as average family size was slightly larger for urban families. Per capita after-tax income was 8 percent lower for rural than urban families (\$5,520 vs. \$5,980). The income of both groups of single-parent families was much lower than that of married-couple families in each respective area.

Most before-tax income for rural and urban single-parent families was derived from wages and salary, 70 percent and

73 percent, respectively. There was no significant difference in the amount received from alimony/child support/regular contributions between the two groups. Public assistance and food stamps composed significantly smaller amounts of before-tax income for rural than urban families. Together, these sources accounted for 6 percent of total income for rural single-parent families and 12 percent for urban families. Other sources of income, which include income from pensions, Supplemental Security Income, unemployment compensation, and owned businesses, accounted for 9 percent of income for rural families and 6 percent for urban families, amounts that were not significantly different.

...there was a significant difference in vehicle ownership between families in the two areas.

Table 4. Percentage of single-parent families with expenditures by rural-urban residence, 1990-92

Expenditure	Rural	Urban
Housing	100	100
Food	100	100
At home	100	100
Away from home	74	74
Transportation	90	87
Clothing	86	91
Health care	66	55*
Entertainment	89	82*
Personal care	58	62
Education or reading	58	61
Child care	17	20
Home furnishings or equipment	60	64
Alcohol or tobacco	55	54
Retirement or pensions	71	66
Miscellaneous ¹	65	55*

¹Includes life insurance, cash contributions, finance charges excluding mortgages and vehicles, or occupational expenses.

*Statistically significant at $p \leq .01$ based on unweighted data.

The incomes of the families examined do not include the value of noncash benefits such as Medicaid, free and reduced-price school meals, WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) and public housing. Such benefits would raise the effective incomes of single-parent families since they are likely to receive these benefits given their low incomes. A Census Bureau study found the poverty rate among female-headed households was dramatically reduced when noncash benefits were taken into consideration (12). It should be noted that not all people who are eligible for these benefits receive them; some people may not be aware of their eligibility and others may not wish to apply.

Therefore, noncash benefits do not necessarily raise the effective income of all single-parent families eligible for them.

Spending

The percentages of rural and urban families incurring transportation expenses were not significantly different (table 4). Despite this, there was a significant difference in vehicle ownership between families in the two areas. Among rural single-parent families, 85 percent owned a vehicle, compared with 66 percent of urban families. The lack of public transportation in rural areas is likely the main reason for the greater vehicle ownership among families in these areas.

Table 5. Expenditures of single-parent families by rural-urban residence, 1990-92

Expenditure	Rural	Urban
Total expenditures	\$15,660	\$19,530*
Per capita	5,590	6,730*
<i>Percent of total expenditures</i>		
Housing	27	32*
Food	21	19*
At home	17	16*
Away from home	4	3
Transportation	20	15
Clothing	5	6*
Health care	5	4
Entertainment	5	4*
Personal care	1	1*
Education and reading	1	2*
Child care	2	2
Home furnishings and equipment	3	4*
Alcohol and tobacco	2	2
Retirement and pensions	5	6*
Miscellaneous ¹	3	3

¹Includes life insurance, cash contributions, finance charges excluding mortgages and vehicles, and occupational expenses.

*Statistically significant at $p \leq .01$ based on unweighted data.

A high proportion of both rural and urban single-parent families did not have health care expenses (34 and 45 percent—a significant difference). Health care expenses (including insurance premiums) only cover those made out-of-pocket. Whether zero out-of-pocket health care expenses translates into no health insurance coverage is unknown. Some of these families may have employer-provided insurance that covers all medical expenses. Others may depend on government programs, such

as Medicaid, or nonprofit organizations to provide health care. Still, it is likely that some of these families do not have any type of health insurance coverage and go without medical care altogether.

A low proportion of families in rural and urban areas had child care expenses (17 and 20 percent—a nonsignificant difference). This may seem surprising given that most single parents in both areas were employed. A large proportion of child care for preschool children,

however, is provided by relatives who likely are not paid (7). Children in single-parent families may also be more likely to remain home alone after school. In addition, those parents who work part time may do so to be home when their children return from school.

Retirement or pension expenses, which include Social Security deductions (Social Security deductions are considered an expense in the CE and are not subtracted from after-tax income), were incurred by 71 percent of rural and 66 percent of urban single-parent families, a nonsignificant difference. For families in both areas, these percentages are lower than the proportion of employed parents. For example, 80 percent of rural single parents were employed, but 71 percent of rural single-parent families had retirement or pension expenses. Some single parents who were employed part time may not have retirement benefits. Also, single parents may be employed through informal arrangements without retirement coverage.

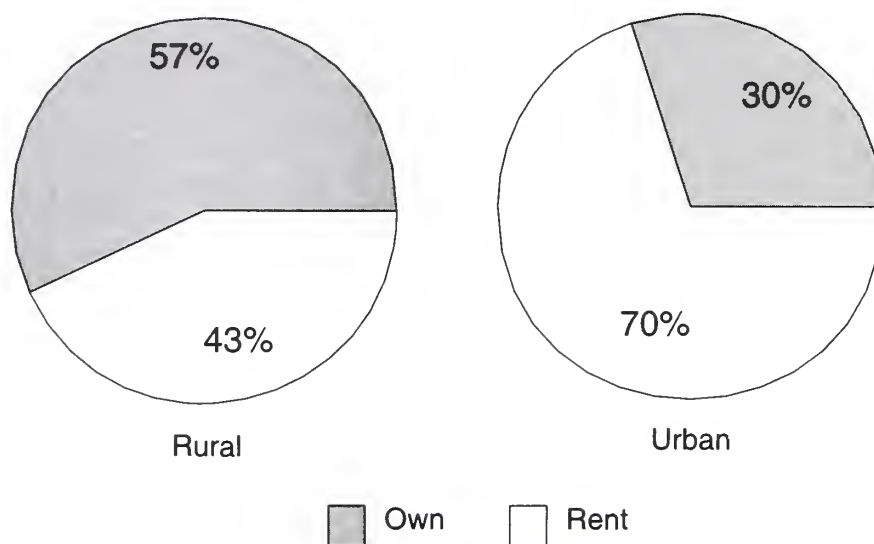
Total expenditures averaged \$15,660 for rural single-parent families and \$19,530 for their urban counterparts, a significant difference (table 5). The total expenses of rural families slightly exceeded their after-tax income (by about \$200); however, the expenses of urban families exceeded their after-tax income by 13 percent. The discrepancy between income and expenses may reflect underreporting income, incurring debt or using savings to cover expenses, or reporting expenses paid by others.

Housing accounted for the largest share of total expenses for single-parent families in rural and urban areas (27 and 32 percent) but made up a significantly larger amount for urban than rural families. It should be noted that for homeowners, the shelter component of housing expenses includes only mortgage interest and not principal payments; mortgage principal payments are considered a form of savings in the CE. The effective housing expenses of families would therefore be higher than those reported here.

There was a significant difference in the housing tenure of single-parent families in the two areas. Only 30 percent of urban single-parent families owned their homes, compared with 57 percent of rural families (fig. 2; this also implies that overall housing expenses of rural, compared with urban families would be higher than reported here). Part of this difference may be explained by the type of housing. Twenty-nine percent of rural single-parent families resided in a mobile home, compared with only 5 percent of urban families, a significant difference (fig. 3). The cost of a mobile home is much less than other forms of housing; the average price of a mobile home was \$28,400 in 1992 (14).

Food made up the second largest share of total expenses for rural and urban single-parent families (21 and 19 percent—amounts that were significantly different), followed by transportation (20 and 15 percent—amounts that were not significantly different). Although food expenses include the value of food stamps spent, the value of other benefits received from food programs, such as WIC (Special Supplemental Nutrition

Figure 2. Housing tenure of single-parent families by rural-urban residence, 1990-92*



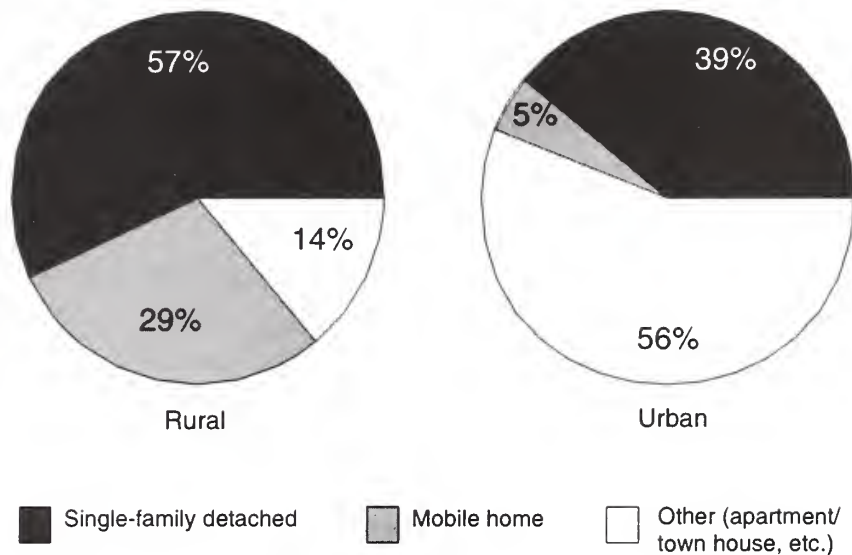
*Statistically significant at $p \leq .01$ based on unweighted data.

Program for Women, Infants, and Children), are not included. Given their lower income, single-parent families are more likely than other family types to receive these benefits so their effective food expenses are likely greater.

Other components of the budget each made up less than 10 percent of total expenditures for both rural and urban single-parent families. Clothing accounted for 5 percent of total expenses for rural families and 6 percent for urban families, amounts that were significantly different. Health care accounted for 5 percent of total expenses for rural families and 4 percent for urban families, amounts that were not significantly different. Again, health care only includes out-of-pocket expenses and not that portion covered by insurance or other programs.

Child care accounted for just 2 percent of total expenses; there was no significant difference in expenses between families in the two areas. This figure is somewhat misleading as it includes families with and without the expense, and many people did not have child-care expenses; for only those with the expense, the percentage would be much higher. Alcohol and tobacco also accounted for 2 percent of total expenses, and there was no significant difference in these expenses between families in the two areas. Retirement and pensions made up 5 to 6 percent of total expenses for families in both areas and were significantly higher for urban families.

Figure 3. Type of housing inhabited by single-parent families by rural-urban residence, 1990-92^{1*}



¹Includes both owners and renters.

*Statistically significant at $p \leq .01$ based on unweighted data.

Discussion

This study found similarities and differences between rural and urban single-parent families with regard to sociodemographic characteristics and economic status. In terms of similarities, single-parent families in rural and urban areas had a low average income. This low income was exacerbated by the low educational level and work-force participation of single parents. Slightly over one-fourth of rural and urban single parents did not have a high school diploma. Although most rural and urban single parents were employed, 20 to 27 percent were not. A high proportion were employed part time—42 percent of rural single parents. However, wages or salary still accounted for most of

before-tax income. Therefore, policies or programs that help single parents move into the labor force and increase their earnings potential would be most effective in improving their economic status.

Despite having dependent children in the household, most rural and urban single parents did not receive child support. This compounds the poorer economic status of single-parent families. The receipt of child support payments that reflect adequate expenses on a child would alleviate the poorer economic status of these families. It has been claimed that better child support enforcement may do more to ameliorate poverty among rural children than community economic development (4).

Housing, food, and transportation accounted for about two-thirds of total expenditures for rural and urban single-parent families. It is not surprising that these necessities made up such a large part of the budget given the poorer economic circumstances of these families. A large proportion of single-parent families in both areas reported no health care expenditures. Although these expenses may be fully covered by an employer or government program, it could be that some families are going without health care. This may be the case, especially for rural single-parent families, since health care is typically more expensive and there is a shortage of medical personnel in rural areas (11). More research on the health care situation of rural and urban single-parent families is needed.

The income of rural families was significantly lower than that of urban families. When cost-of-living differences between rural and urban areas are taken into account, whether rural single-parent families are still worse off is unknown. Although rural areas are thought to have a lower cost of living than urban areas, no index in the United States has ever measured cost-of-living differences between rural and urban areas (2). Future research needs to examine cost differences between rural and urban areas to determine its effects on the economic status of families in the two areas.

The higher income of urban single-parent families partly reflects the significantly greater percentage of such families receiving public assistance and food stamps. After subtracting average public assistance and food stamp income from the total income of urban single-parent families, their income was still slightly above that of their rural counterparts. Perhaps some rural single-parent families are eligible for public assistance or food stamps but are not receiving these benefits. Research has shown that rural residents are less likely than urban residents to possess accurate eligibility information and to hold more adverse attitudes toward the use of welfare (8). If they are indeed eligible, some rural single parents may also be missing out on job training programs associated with public assistance programs such as Aid for Families With Dependent Children.

There was a significant difference in the type of housing inhabited by rural and urban single-parent families. A substantial proportion of rural families lived in mobile homes. Recent natural disasters in the United States have focused attention on the safety of mobile homes. Since so many rural single parents and their children reside in these homes, it is imperative that safety standards be established and enforced.

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Per Capita Income and Expenditures of Baby-Boomer Households

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The 1992 Consumer Expenditure Survey was used to examine per capita income and expenditures for various types of households—single-parent, husband-wife only, husband-wife-child, single-person, and extended-member households—headed by baby boomers (those born between 1946-64). Per capita comparisons were undertaken because average household size ranged from one to four people. Single-parent households had significantly lower per capita income than other households. Per capita income was \$6,474 for single-parent households, compared with \$9,390 for extended-member, \$11,731 for husband-wife-child, \$25,987 for husband-wife only, and \$27,090 for single-boomer households. Single-parent households had 76 percent of income from earnings, whereas other baby-boomer households received 91 to 98 percent of their income from wages and salaries. Single-parent boomers were more likely than others to receive public assistance income. They had significantly lower expenditures than households composed of husband-wife only, husband-wife-child, and single persons. Results are useful to professionals who help families allocate their limited resources and to policymakers who evaluate the impact of different income sources used by families (especially single parents) to meet their day-to-day needs.

In 1992, 26 percent of all U.S. households were married couples with children, 29 percent were married couples without children, 25 percent were single persons, 9 percent were other families with children, 6 percent were other families without children, and 5 percent were nonfamily households (4). Demographic trends indicate that the number of U.S. households headed by baby boomers (born 1946-64) has increased. In 1980, 14.0 million households were headed by boomers. By 1991, that number had risen to 21.3 million—the largest increase

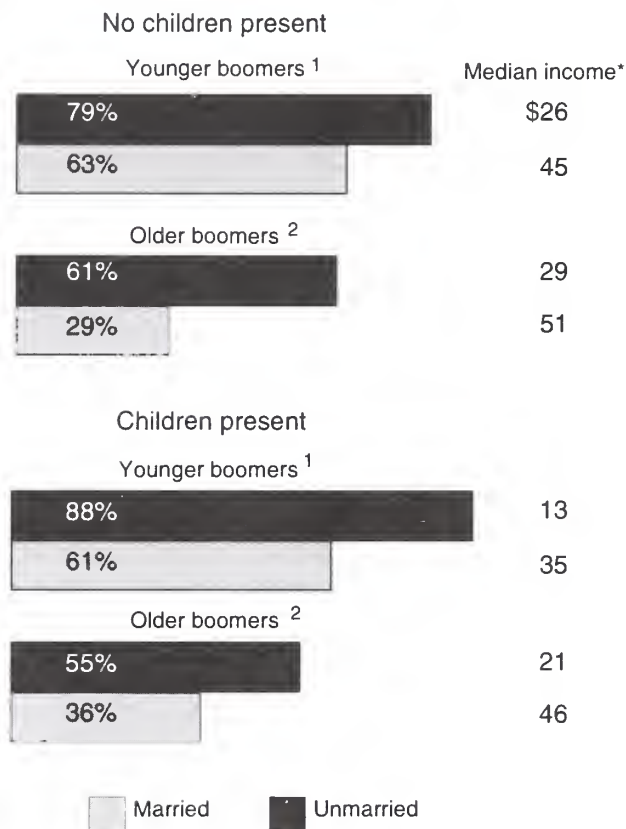
among householders of any age group (6). In 1993, this cohort was 30 percent of the population. At the turn of the century, there will be 76.8 million boomers (28 percent of the U.S. population) and when they are between 46 and 64 years old (2010), their number will decline to 74.2 million or 25 percent of the population (2). When boomers join the ranks of the elderly after 2010, Census estimates that the percentage of elderly will increase from 40.1 to 70.2 million (2). The size of the aging baby-boomer generation will affect its ability to meet health care needs and to borrow on the home's value equity. The uncertainty of

financial support systems such as Social Security, pensions, and in-kind income for health expenditures increases concern about this group's future well-being. Thus, it is important to study the current status of this large segment of the U.S. population.

Marital status and presence of children are important factors in determining boomers' current and future economic well-being (1,3). Using the Survey of Consumer Finances data, a Congressional Budget Office (CBO) (1) study showed that unmarried boomers tend to have lower wealth¹-to-income ratios and lower wealth than married-couple boomers. The CBO study found that among boomers with and without children, a higher percentage of the unmarried compared with the married had median wealth that was less than median income (fig. 1). Younger boomers were more likely than older boomers to have less wealth than income.

Because the economic situation varies by household types, examination of per capita income and expenditures may indicate which households in the boomer cohort are economically vulnerable and thus less likely to accumulate wealth. Household types include single parent; husband and wife only; husband, wife, and children; single person; and extended members.² Because reports

Figure 1. Percentage of baby boomers with median wealth less than median income, 1989



¹Age 25-34.

²Age 35-44.

*\$ thousands.

Source: The Congress of the United States, Congressional Budget Office, 1993, *Baby Boomers in Retirement: An Early Perspective*.

¹Wealth includes "...liquid as well as illiquid financial assets such as individual retirement accounts (IRA's) or Keogh plans; the value that can be borrowed against employer-provided pension accounts; the value of any housing, land, and automobiles owned less the debt owed to them; less other nonhousing liabilities such as credit-card debt" (1, p. 12).

²Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

generally indicate that single-parent households tend to be at greater economic risk than others, single-parent boomers will be compared with the other households. Per capita income and expenditure data are reported because comparisons are made among households of different average sizes.

Source of Data and Sample

Data for this study are from the interview component of the 1992 Consumer Expenditure Survey (CE) conducted by the Bureau of the Census for the Bureau of Labor Statistics (7). The CE is an ongoing survey that collects data on household expenditures, income, and major socioeconomic and demographic characteristics. A national sample of

consumer units is interviewed once each quarter for five consecutive quarters; the first interview is used only for bounding³ purposes. Using a rotating sample design, about one-fifth of the sample is replaced each quarter. Each year of CE data contains information for about 20,000 quarterly interviews. Income⁴ data are annual, and quarterly expenditure data are multiplied by four to provide estimates of annual expenditures. Because of confidentiality restrictions, some income and expenditure data are subject to topcoding. The data are weighted to represent the U.S. civilian, noninstitutionalized population. In 1992, there were 20,796 consumer units,⁵ with 8,841 having reference

persons⁶ between 28 and 46 years old (members of the baby-boom cohort). Chi-square tests of independence and one-way analysis of variance were used to analyze the unweighted data. Differences were tested at $p \leq .01$.

Characteristics of Baby-Boomer Householders

Table 1 shows the distribution of CE householders by age and family type. Boomer householders (28 to 46 years old) were significantly more likely than householders of other ages to be parents—either married with children or a single parent. Table 2, p. 30, shows the distribution of boomer respondents by socioeconomic

and demographic characteristics and consumer unit type. Chi square results indicate significant differences across households. Discussion of one-way ANOVA results focuses on significant differences between single parents and other households.

Race

Findings show a relationship between boomers' race and household type. A significantly higher percentage of White boomers lived in husband-wife and husband-wife-children households than in other types of consumer units. In contrast, Black boomers were less likely to live in these consumer units and more likely to live in single-parent, single-person, or extended-member households.⁷

³Demographics, family characteristics, and a 1-month recall of expenditures are collected in this interview. Expenditure data from this interview are used to prevent the reporting of expenditures for an indefinite period in the past.

⁴Income is the combined income of all consumer unit members, 14 years of age or over, during the 12 months preceding the interview. Money income before taxes includes the following components: Wages and salaries; self-employment income; Social Security, private and government retirement; interest, dividends, rental income, and other property income; unemployment and workers' compensation and veterans' benefits; public assistance, supplemental security income, and food stamps; regular contributions for support; and other income (e.g., care of foster children; cash scholarships, fellowships, or stipends; meals and rent as pay).

⁵A consumer unit consists of either: (1) all members of a particular housing unit who are related by blood, marriage, adoption, or other legal arrangements; (2) two or more people living together who pool their incomes to make joint expenditure decisions; or (3) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent. To be considered financially independent, at least two of the three major expense categories (housing, food, and other living expenses) have to be provided by the respondent. In this article, consumer unit and household are used interchangeably.

⁶Reference person is the first family member mentioned by the survey respondent when asked to "start" with the name of the person or one of the persons who owns or rents the home. The relationship of all other consumer unit members is determined by this person. The reference person may be the respondent. In this article, householder and reference person are used interchangeably.

⁷Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

Table 1. Distribution of consumer units, 1992

Variables	Consumer unit				
	Single parent	Husband, wife only	Husband, wife, children	Single person	Extended member ¹
Total	1,392	4,308	5,877	5,923	3,296
<i>Percent</i>					
Age (years)*					
Less than 28	9	11	17	45	18
28 - 46	12	11	44	20	13
47 - 65	2	32	23	23	20
66+	0	37	14	47	12

*Statistically significant at $p < .01$ based on Chi-square analysis of unweighted data.

¹Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

Table 2. Socioeconomic and demographic characteristics of baby-boomer respondents, by consumer unit, 1992

Variables	Consumer unit				
	Single parent	Husband, wife only	Husband, wife, children	Single person	Extended member ¹
Sample size	1,040	929	3,999	1,669	1,204
Average household size ²	3.00	2.00*	4.08*	1.00*	3.86*
Average number of vehicles ²	1.06	2.51*	2.56*	1.35*	2.28*
Average number of earners ²	1.03	1.85*	1.94*	.93	2.06*
<i>Percent</i>					
Respondent					
Race*					
White	69	91	89	82	76
Black	29	5	7	15	19
Asian and other ³	2	4	4	3	5
Gender*					
Female	89	15	15	39	45
Male	11	85	85	61	55
Education*					
Less than high school	22	12	13	11	24
High school	36	26	32	22	32
Some college	29	22	25	27	24
College graduate and more	13	40	30	40	20
Occupation*					
Managerial and professional	21	35	30	33	21
Technical, sales, administrative support and service	39	25	26	31	34
Other ⁴	15	36	37	29	35
Not working and retired ⁵	25	4	7	7	10

See notes at end of the table.

(table continues)

Gender

Census data for 1990 indicate that 69 percent of all householders are male and 31 percent, female (5). CE respondents (householders) are those who own or rent the home. Sixty-four percent of householders were males and 36 percent were females. Results show there is a significant relationship between respondents' gender and household type. Females were more likely to be

identified as respondents in single-parent households (89 percent). Eighty-five percent of the households identified as having husbands (husband-wife only and husband-wife-children) specified the male as the respondent. People living alone were more likely to be male than female, and respondents in extended-member households were more likely to be males, also.

Education

Education and household type were significantly associated. Respondents in single-parent (42 percent) and extended-member (44 percent) households were less likely than other respondents to report having any college education. Single boomers were better educated than other boomers. Sixty-seven percent of single boomers had some college education, as did 62 percent of respondents

Table 2. (Continued)

Variables	Consumer unit				
	Single parent	Husband, wife only	Husband, wife, children	Single person	Extended member ¹
Household					
Number of earners*					
None	22	0	1	7	3
One	60	14	24	93	20
Two	13	86	59	NA	54
Three and more	5	NA	16	NA	23
Before-tax income*					
<\$10,000	29	2	4	15	9
\$10,000 - \$19,999	27	8	8	17	15
\$20,000 - \$29,999	15	11	12	21	18
\$30,000 - \$39,999	10	11	14	15	15
\$40,000+	9	54	48	18	31
Not reported	10	14	14	14	12
Region*					
Urban					
Northeast	21	19	19	19	19
Midwest	25	19	22	18	18
South	30	28	26	31	28
West	15	17	18	23	24
Rural	9	17	15	9	11

*For continuous variables, the Scheffé computed on F ratios with $p \leq .01$ was used. For categorical data, Chi-square with $p \leq .01$ was used. Unweighted data used.

¹Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

²Single parents are compared with other consumer units.

³Consists of Asian and Pacific Islander; Native American, Aleut, and Eskimo; and other.

⁴Consists of farming, forestry, and fishing; precision production, craft and repair, operators, fabricators, and laborers; the Armed Forces; self-employed; and other.

⁵Only four boomer respondents were retired.

NA = Not applicable.

in husband-wife only households and 55 percent of those living with a spouse and children. Compared with other boomer respondents, those living as singles and couples without children were more likely to be college graduates (40 percent each).

Occupation

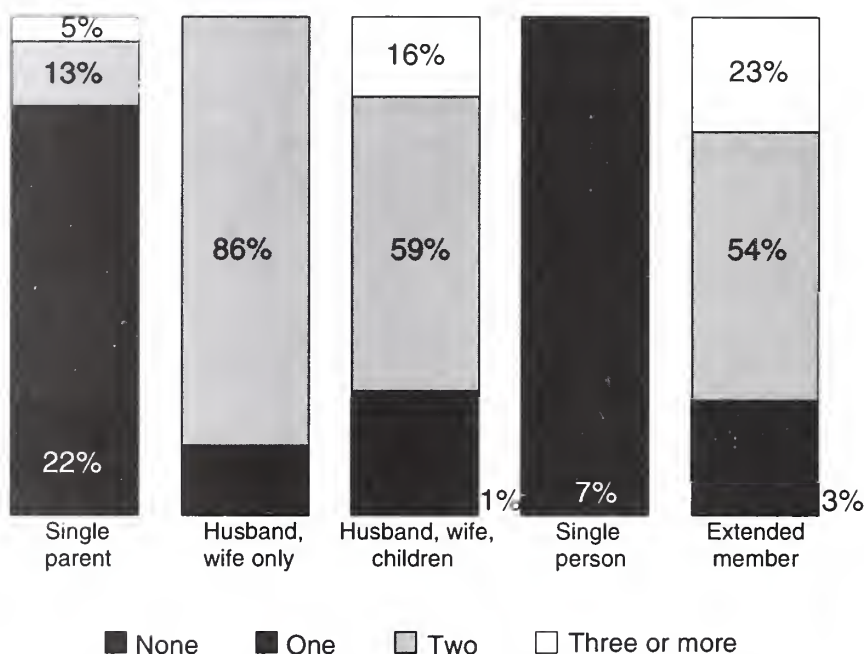
Respondents living in single-parent households (39 percent) were significantly more likely than those living in other boomer households (25 to 34 percent) to work in sales and service occupations. Also, one in four single-parent respondents reported not working

(or retired⁸)—a much higher percentage than that reported by respondents living in other types of households.

⁸Only four boomer respondents were retired.

Compared with other boomers, single-parent boomers spent significantly less overall on a per person basis...

Figure 2. Number of earners in baby-boomer households, by consumer unit type, 1992*



*Statistically significant at $p \leq .01$, unweighted data.

Number of Earners

One-way ANOVA results indicated that the number of earners in single-parent households was significantly lower than the number in households with couples (with and without children) and extended-member units. A majority (60 percent) of single-parent households reported one earner (table 1 and fig. 2). About one in five single-parent households (22 percent) had no earners. This was a much higher rate than found for the other household types. Most people living alone were earners (93 percent). The remaining household types were more likely to report two earners than zero, one, or three or more; married-couple boomers without children were

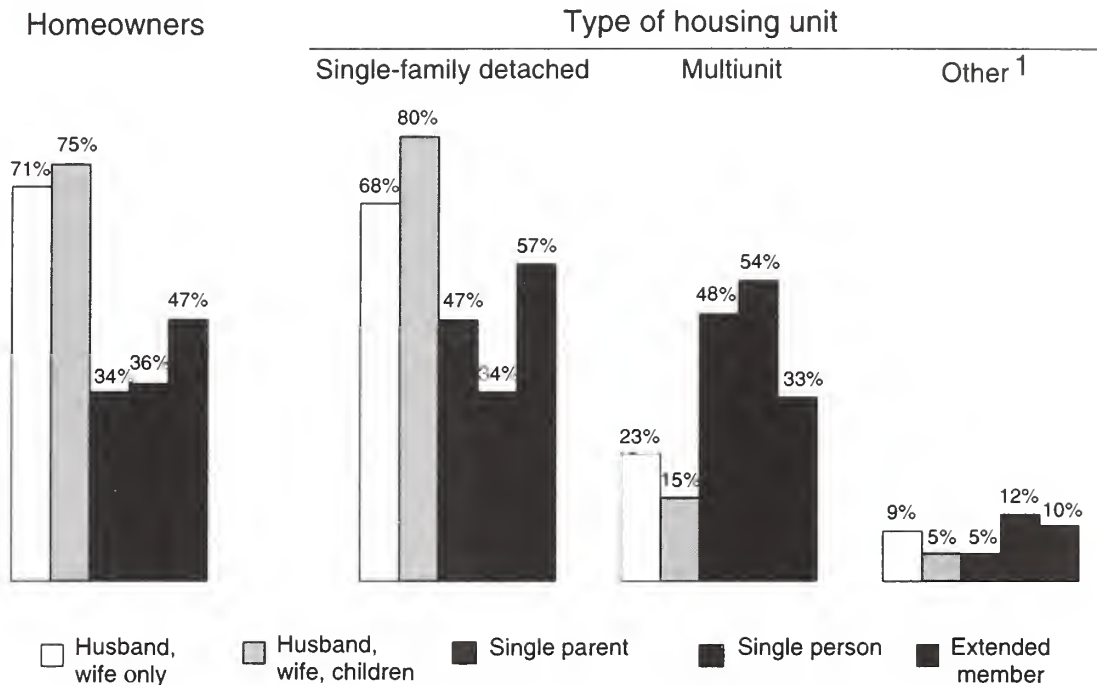
most likely to claim two earners—86 percent, compared with 59 percent of husband-wife-children households and 54 percent of extended-member households.

Region

Region and household types were significantly related. Most of the boomer respondents lived in urban areas of the United States. A higher percentage lived in the urban South⁹ than in the other regions—regardless of household type. Single-parent households were

⁹According to the 1992 CE, a higher percentage of total households live in the South—urban South, 28 percent; urban Midwest, 21 percent; urban West, 18 percent; urban Northeast, 19 percent; and rural areas, 14 percent.

Figure 3. Housing characteristics of baby-boomer respondents, by consumer unit type, 1992*



*Statistically significant at $p \leq .01$, unweighted data.

¹Mobile homes or trailers and other.

more likely to reside in the Northeast and Midwest, compared with other household types. They were less likely than other households to live in the West or in rural areas. Single-person and extended-member households were more likely than others to live in the urban West. Couples with and without children were more likely than other boomer respondents to live in rural areas.

Housing

Figure 3 shows the housing characteristics of households headed by baby-boomer respondents. A significant difference existed between housing tenure and boomers' household types. Boomers in single-parent and single-person households were more likely to be renters (66 and 64 percent, respectively) than those living in other types of households. Single-parent households were as likely to live in a single-family detached housing unit as in a multiunit housing structure. A majority of couples with and without children were homeowners (75 percent and 71 percent, respectively). Couples

with children were more likely than other boomers to live in single-family detached units (80 percent), and single boomers were more likely than other boomers to reside in multiunit structures (54 percent). Few (5 to 12 percent) of the boomer respondents resided in units other than single-family detached or multiunit structures. Compared with other boomers, couples with children lived in significantly large housing units: 8.4 rooms (including baths), compared with 7.4 (couples without children), 7.2 (boomers in extended-member households), 6.7 (single parents), and 5.8 (single boomers).

Although not the largest household, single-parent boomers had significantly smaller average before-tax per capita income than the other boomer households.

Income and Income Sources

Boomers likely to have a before-tax family income below \$20,000 were single parents (56 percent), single persons (32 percent), and those in extended-member households (24 percent) (table 2). Boomer couples with and without children were more likely than others to have before-tax income of \$30,000 or more. Single-parent boomers had significantly lower income than other households. Single-parent boomers had an average 1992 before-tax¹⁰ family income of \$19,422 (table 3). Couples with and without children had more than twice as much.

Because household size differed significantly across households (table 2), per capita data are reported. Although not the largest household, single-parent boomers had significantly smaller average before-tax per capita income than the other boomer households. Per capita income of couples with children (average family size=4.1) was nearly double that of the single parents (average family size=3.0) (\$11,731 vs. \$6,474) (fig. 4, p. 36). Single boomers and couples without children—the smaller households—had average per capita incomes of \$27,090 and \$25,987, respectively. Thus, it appears that among these households, single-parent boomers had much less income on a household and per capita basis.

Family income for boomers was derived mostly from earnings. Except for single-parent households that had 76 percent of income from earnings, baby boomers received 91 to 98 percent of their income

in wages and salaries. Single parents received 12 percent of their income from public assistance and 8 percent from alimony, child support, and other regular contributions.¹¹

Significantly smaller percentages of single-parent boomers than other boomer households received any income from earnings; interest and dividends; and unemployment and workers' compensation and veterans' benefits. Single-parent boomer households were significantly more likely to receive income from public assistance; and alimony, child support, and other regular contributions than were other boomer households.

The dollar shares of public assistance income received from different sources by boomer households are presented in figure 5, p. 37. Single-parent boomer households were more likely to receive welfare and food stamp income than other public assistance income. Couples with and without children were more likely to receive unemployment and workers' compensation and veterans' payment income than other public assistance income. Figure 5 also shows that extended-member households were as likely to receive welfare income as unemployment and workers' compensation and veterans' payment income.

¹¹For other regular contributions, the question asked was, "During the past 12 months, did you (or any member of your CU [consumer unit]) receive income from any of the following.... Income from regular contributions from... other sources such as from persons outside the CU?"

¹⁰Averages calculated for the 87 percent of consumer units that reported major sources of income.

Table 3. Income sources of consumer units headed by baby-boomer respondents,¹ 1992

Income sources	Single parent ²	Husband, wife only	Husband, wife, children	Single person	Extended member ³
Sample size	924	797	3,422	1,431	1,049
Average total before-tax income	\$19,422	\$51,973*	\$47,864*	\$27,090*	\$36,244*
Average total before-tax per capita income	6,474	25,987*	11,731*	27,090*	9,390*
Earnings	14,821	50,877*	46,011*	25,724*	32,878*
Interest, dividends	115	323	522*	303	169
Pensions, annuities	127	155	140	83	269
Social Security, Railroad Retirement	397	148*	175*	273*	995*
Public assistance	2,419	373*	780*	472*	1,565*
Supplemental Security Income	221	46*	55*	107*	260
Welfare	1,207	15*	83*	28*	488*
Food stamps	786	15*	90*	25*	319*
Unemployment and workers' compensation, and veterans' payments	205	297	553*	313	498
Alimony, child support, other regular contributions	1,542	97*	236*	235*	369*
<i>Percent receiving income⁴</i>					
Earnings	77	99*	98*	92*	95*
Interest, dividends	14	38*	33*	31*	18
Pensions, annuities	—	—	2	—	4
Social Security, Railroad Retirement	—	—	2	5	14
Public assistance	40	11*	17*	17*	30*
Supplemental Security Income	—	—	—	5	6
Welfare	27	—	3*	—	10*
Food stamps	33	—	4*	—	13*
Unemployment and workers' compensation and veterans' payments	6	10	12*	10*	15*
Alimony, child support, other regular contributions	36	—	5*	4*	12*

¹For the 87 percent of consumer units that reported major sources of income.

²Single parents are compared with other consumer units.

³Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

⁴The percentage within each consumer unit that received income from each source.

—N is too small to report.

*Unweighted data were used with the Scheffé computed on F ratios with $p \leq .01$.

Per Capita Expenditures for Consumer Units Headed by Baby-Boomer Respondents

Compared with other boomers, single-parent boomers spent significantly less overall on a per person basis (\$7,138) (table 4, p. 38). Couples without children and single persons spent 2-1/2 to three times as much per capita.

Housing

Housing is a large expenditure for all families. On a per capita basis, single-parent boomers spent significantly less (\$2,612) than all other boomers except those in extended-member households. In fact, single persons and couples without children spent two to three times more per person than did single parents.

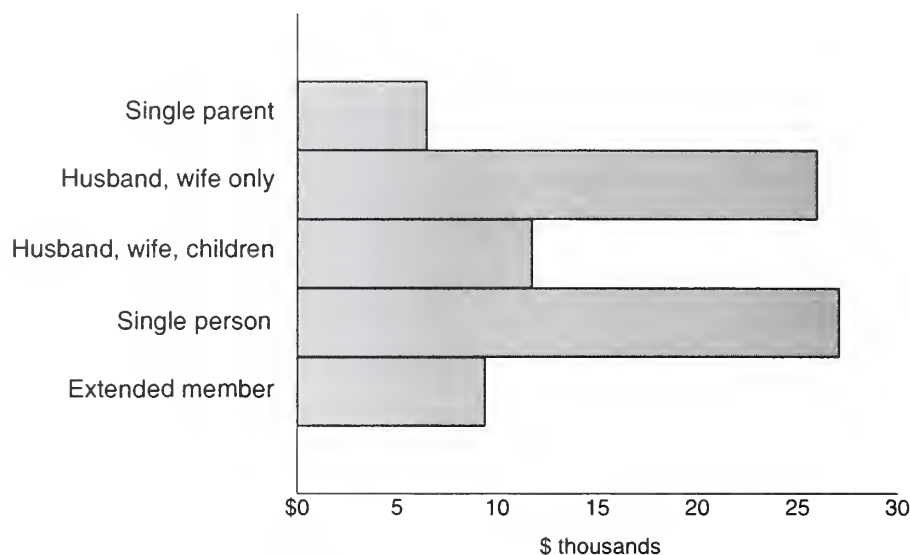
Single-parent and single-person boomer households spent larger shares of their total per capita expenditures on housing (37 percent each), followed by couples with children (33 percent), couples without children, and boomers in extended-member households (32 percent each) (table 5, p. 38).

Food

Compared with couples without children and single-boomer respondents, single-parent boomers had significantly lower per capita expenditures for total food (\$1,310) and food at home (\$1,076). Compared with couples with and without children and single persons, single parents had a significantly lower per capita expenditure for food away from home (\$234).

Single-parent boomers and boomers in extended households spent 18 and 17 percent, respectively, of their total per capita expenditure for food. Couples with children spent 15 percent and

Figure 4. Average per capita before-tax income of baby-boomer households, 1992*



*Significantly different, F ratio with $p \leq .01$.

couples without children and single persons, 14 percent each. The percentage of total per capita expenditure spent for food at home ranged from 15 percent (single parents) to 9 percent (single persons and couples without children). The percentage spent for food away from home ranged from 5 percent (couples only and single persons) to 3 percent (couples with children and single parents).

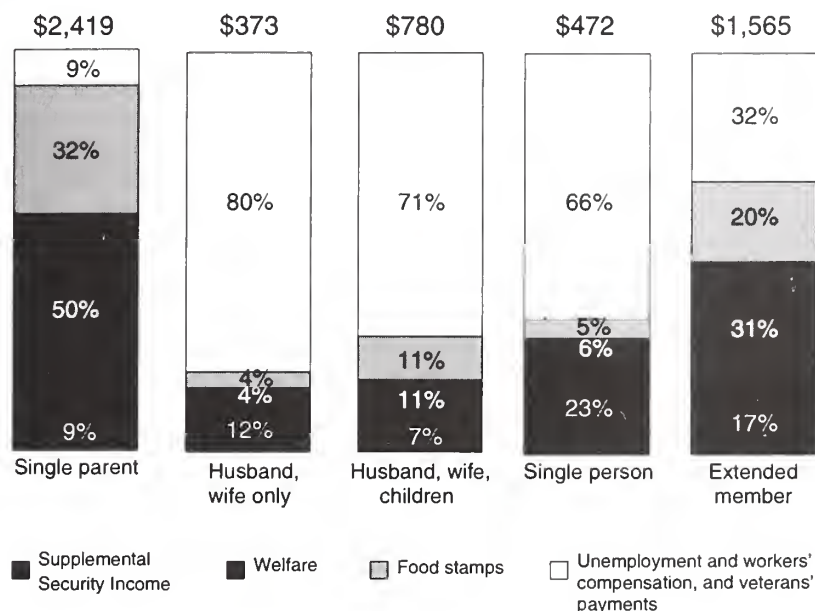
Transportation

On a per-person basis, single-parent boomers had significantly lower expenditures for transportation (\$1,229) than other boomers (table 4). Single persons and couples without children spent about triple this amount (\$3,659 and \$3,461, respectively). Single parents,

single persons, and couples with children spent similar shares of total per capita expenditure on transportation (17 to 18 percent). Compared with others, boomer couples without children and those in extended-member households spent larger shares of their total per capita expenditure for transportation (20 percent each).

One factor that influences transportation expenditures is the number of vehicles owned or leased. Single parents had significantly fewer vehicles than boomers in other households. On average, the number of vehicles ranged from 1.1 (single parents) to 2.6 (couples with children). Single boomers owned 1.4, those in extended families owned 2.3, and couples without children owned 2.5 vehicles.

Figure 5. Dollar shares of public assistance received by consumer units headed by baby-boomer respondents, 1992



Miscellaneous Goods and Services

Single-parent boomers spent the smallest amount per capita (\$675) for other goods and services, followed by boomers in extended-member households, couples with children, couples without children, and single people. The amount spent by single-parent boomers was significantly different from all boomers except those in extended households. Boomers spent about 10 percent of total per capita expenditure on miscellaneous goods and services.

Conclusion

The primary finding of this study is that compared with other boomers, single-parent boomers appear to be the most vulnerable economically. Single-parent boomers have the lowest before-tax household income, per capita income, and expenditures. Also, compared with other boomers, single-parent boomers spent a higher percentage of total per capita expenditure for food and clothing with less income left for discretionary expenditures.

Single-parent boomers were more likely than other boomers to receive welfare and food stamps. Households headed by single-parent boomers averaged \$402 in welfare income per person, compared with \$126 for boomers in extended-member units, \$28 for one-person, \$20 for husband-wife-children, and \$8 for husband-wife only households. Per capita food stamp income for single-parent boomers was \$262, compared with \$83 for boomers in extended-member households, \$25 for single-person, \$23 for husband-wife-children, and \$8 for husband-wife only households.

Apparel

Single-parent boomer respondents spent \$407 on apparel for each person. This was significantly lower than the amount spent by husband-wife only (\$890) and single-person respondents (\$1,092). All boomers spent 5 to 6 percent of per capita expenditures for apparel.

Health

On average, single parents and extended-member households spent significantly less for health care than the amount spent by other boomers. Shares of total per capita expenditures for health care ranged from 3 to 5 percent. Single parents spent 4 percent.

Personal Insurance and Pensions

Single parents spent \$503 per person for personal insurance and pensions, a significantly lower amount than that

spent by the other households. Per capita expenditures for households spending the most—couples without children and single boomers—were about five times the expenditure of single-parent households. Compared with other boomer households, single parents spent a smaller share (7 percent) and couples without children spent a larger share (14 percent) of total per capita expenditure for insurance and pensions.

Education and Reading

On a per capita basis, single-parent boomers spent \$110 for education and reading. This was significantly less than the amount spent by other boomers except those in extended-member households. Per capita shares used for this expenditure category were similar (1 to 2 percent) for all types of households.

Table 4. Per capita expenditures of baby-boomer respondents, by consumer unit, 1992

Variables	Consumer unit				
	Single parent ²	Husband, wife only	Husband, wife, children	Single person	Extended member ¹
Sample size	1,040	929	3,999	1,669	1,204
Average total per capita expenditure	\$7,138	\$17,866*	\$9,539*	\$21,694*	\$7,731*
Housing	2,612	5,757*	3,123*	7,986*	2,465
Food	1,310	2,448*	1,463	2,964*	1,311
Food at home	1,076	1,592*	1,126	1,856*	1,014
Food away from home	234	856*	337*	1,108*	298*
Transportation	1,229	3,461*	1,723*	3,659*	1,577*
Apparel	407	890*	487	1,092*	402
Health care	292	694*	432*	682*	298
Insurance and pensions	503	2,576*	1,120*	2,549*	798*
Education and reading	110	256*	195*	329*	126
Miscellaneous ³	675	1,784*	996*	2,433*	753

¹Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

²Single parents are compared with other consumer units.

³Consists of expenditures for alcohol, entertainment, personal care, tobacco, cash contributions, and other goods and services.

*Unweighted data were used with the Scheffé computed on F ratios with $p \leq .01$.

Table 5. Per capita expenditure shares of baby-boomer respondents, by consumer unit, 1992

Variables	Consumer unit				
	Single parent	Husband, wife only	Husband, wife, children	Single person	Extended member ¹
Housing	37	32	33	37	32
Food	18	14	15	14	17
Food at home	15	9	12	9	13
Food away from home	3	5	3	5	4
Transportation	17	20	18	17	20
Apparel	6	5	5	5	5
Health care	4	4	5	3	4
Insurance and pensions	7	14	12	12	10
Education and reading	2	1	2	2	2
Miscellaneous ²	9	10	10	10	10

¹Extended-member households are those with two or more related or unrelated people, excluding those that consist solely of married couples, married couples with own children, or single parents with own children.

²Consists of expenditures for alcohol, entertainment, personal care, tobacco, cash contributions, and other goods and services.

Implications

Boomers who are single parents, have a high school education or less, and work in lower skilled positions generally spend all of their before-tax income on day-to-day needs, leaving nothing for savings. Most families who purchase a house can accumulate wealth by building up equity in their home. Most single-parent boomers, however, reside in rental units so this option is unavailable to them. Thus, building wealth and net worth will be difficult if not impossible for single-parent boomers, so prospects for the retirement years are bleak. This prospect may be tempered by many factors, including employment and the level and types of benefits received.

Single-parent boomers, mostly women, who rely on different types of public assistance income at this point in the life cycle, will be at a disadvantage during their later years. Although supplemental security, welfare, and food stamp incomes are important to present levels of living, these income sources are not designed to allow savings or to increase net worth.

Reports indicate that some boomers will have a harder time meeting day-to-day needs during retirement. Included are those without employee pensions, single parents, renters (1), and single women (3). It will become increasingly important for policymakers and family professionals to address the concerns of the most vulnerable in this large cohort before it reaches retirement age.

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Dollars for Scholars: Postsecondary Costs and Financing, 1990-91

Using data from the 1990 Survey of Income and Program Participation (SIPP), this report examines patterns of school enrollment, education costs, financial aid, and the associated social, demographic, and economic characteristics of postsecondary students in the United States. Information on those enrolled in undergraduate and graduate/professional degree programs as well as those enrolled in vocational, technical, and business schools at any time during the 1990-91 school year is included in this report. Analysis of enrollment is restricted to people 17 years and older with at least a high school diploma or the equivalent.

Characteristics of Postsecondary Students

Enrollment as measured in this report is not necessarily continuous throughout the entire school year. As a result, the enrollment estimates shown in this report are higher than those from other surveys, such as the Current Population Survey, which uses a one-point-in-time approach in collecting the data. Since enrollment at levels beyond high school is not always a year-long activity, SIPP data may provide a more realistic picture of the total number of people enrolled in a given year than does a one-time cross-sectional survey.

As shown in table 1, an estimated 20.6 million people were enrolled in postsecondary school in the 1990-91 school year, about 14 percent of the eligible population. Thirty-five percent of these

students were enrolled in the first and second years of college and 25 percent were enrolled in the third and fourth years of college. More than 19 percent were in the fifth year or higher, and over 20 percent were in some type of noncollegiate postsecondary school.

Some variation in the patterns of enrollment by level can be observed in various demographic subgroups. A higher proportion of women than men were enrolled in the first 2 years of college (37 vs. 32 percent). This may reflect a higher enrollment by women in 2-year associate degree programs because similar proportions of each sex were enrolled in the third and fourth years of college. A larger proportion of men than women attended a vocational, technical, business, or other school (23 vs. 18 percent).

Enrollment rates also varied among race/ethnicity groups. Non-Hispanic Whites (21 percent) and non-Hispanic others (27 percent) had greater proportions enrolled at the graduate level than either Hispanics or non-Hispanic Blacks (both at 9 percent). A greater proportion of non-Hispanic Black (26 percent) and Hispanic (28 percent) students were enrolled in noncollegiate schools than were non-Hispanic Whites (20 percent) and non-Hispanic others (16 percent).

Differences by age and marital status followed what may be the traditional life course pattern—school completion, followed by employment and family formation. Many students enroll in college shortly after high school graduation, and the proportion enrolled decreases with increases in age. Half of all individuals ages 17 to 24 were enrolled in some type of schooling, compared with only 16 percent of those ages 25 to 34. Never-married people

Table 1. Level of enrollment by selected characteristics for high school graduates 17 years and older, 1990-91 (in thousands)

Characteristic	Total	Enrolled	Percent enrolled	College years 1 to 2	College years 3 to 4	College years 5 or higher	Vocational, technical, business school, or other
Total	142,710	20,560	14	7,232	5,148	3,977	4,203
Sex							
Male	68,453	9,439	14	3,065	2,398	1,829	2,147
Female	74,257	11,121	15	4,167	2,749	2,148	2,056
Race/ethnicity							
Non-Hispanic White	118,214	16,761	14	5,794	4,196	3,500	3,270
Non-Hispanic Black	12,667	1,935	15	744	518	172	501
Hispanic	7,432	1,115	15	442	262	100	312
Non-Hispanic other	4,396	748	17	252	172	205	119
Age (years)							
17 - 24	18,007	9,099	51	4,550	2,896	669	984
25 - 34	37,050	5,903	16	1,459	1,410	1,646	1,388
35 - 44	34,324	3,461	10	834	618	1,075	933
45 - 54	21,018	1,420	7	279	161	451	529
55 - 64	14,971	492	3	72	62	98	260
65 and over	17,340	185	1	38	—	38	109
Marital status							
Married	87,161	7,698	9	1,969	1,423	2,131	2,175
Widowed, separated, or divorced	23,389	2,033	9	612	389	388	643
Never married	32,160	10,829	34	4,651	3,335	1,458	1,385
Average monthly family income							
Less than \$800	10,631	2,183	21	752	627	328	476
\$800 - \$1,249	10,860	1,438	13	475	370	220	372
\$1,250 - \$1,699	11,912	1,422	12	547	283	224	368
\$1,700 - \$2,499	22,794	2,654	12	825	658	447	724
\$2,500 - \$3,399	24,023	3,031	13	1,129	568	651	684
\$3,400 - \$4,199	17,434	2,537	15	888	627	469	554
\$4,200 - \$5,399	17,663	2,748	16	1,001	704	556	487
\$5,400 or more	27,392	4,547	17	1,615	1,310	1,082	539
Dependency status¹							
Dependent student	6,094	6,094	100	3,382	2,002	168	540
Lives away from home	2,965	2,965	100	1,469	1,310	110	75
Lives at home	3,129	3,129	100	1,913	692	58	465
Independent student	14,466	14,466	100	3,850	3,146	3,808	3,663
Financial aid¹							
None received	10,099	10,099	100	3,632	2,495	1,842	2,131
Aid received	10,461	10,461	100	3,601	2,652	2,136	2,072

¹Total is that of enrolled persons only.

— Represents zero.

were more likely than any other marital status group to have been enrolled in the past year.

Highest overall enrollment levels were reported by people in the lowest family income category. This unusual finding may reflect the fact that many students live independently and report their own income rather than depend on support from their parents.¹ Compared with overall enrollment distribution, those students in the highest income group were less likely to be enrolled in non-collegiate schools (12 percent) but more likely to be enrolled at the graduate level (24 percent).

In this report, students are classified as independent if they are either: married; 24 years of age or older; a veteran; the reference person of the household; or if they have health insurance under their own name. The majority of students (70 percent) were classified as independent—not unexpected since 56 percent were age 25 and over. Independent students were distributed fairly evenly across the four levels of enrollment. In contrast, 55 percent of dependent students were enrolled in the first or second year of college and half of the dependent students reported living at home. Ninety-six percent of the students in year five or higher were classified as independent and were likely to be in a graduate or professional degree program. Most (87 percent) of the non-collegiate school enrollees were also independent students.

¹ It is important to remember when examining the relationship between income and enrollment that not all students are “traditional” students who attend college immediately after high school and who are supported by their parents; table 1 includes all students, the traditional and the nontraditional.

Table 2. Recipients of financial aid and mean amount received, 1990-91

Sources	Number of recipients (in thousands)	Percent of all students	Mean amount received
All sources	10,461	51	\$2,919
Employer assistance	3,617	18	979
Loan ¹	3,022	15	3,155
Pell Grant	2,881	14	1,375
Other	2,788	14	1,829
Fellowship/scholarship	2,436	12	2,467
Supplemental Educational Opportunity Grant (SEOG)/			
College work study	890	4	1,510
Veterans' Educational Assistance Programs	416	2	2,503

¹ National Direct Student Loan (or Perkins loan) and Guaranteed Student Loan (of Stafford loan).

Postsecondary Costs

Financial costs for postsecondary education include tuition and fees, books and educational supplies, and for students living away from home, the cost of room and board. In 1990-91, the average total costs of schooling for all postsecondary students, irrespective of type of school, level of enrollment, or amount of time spent in school, were \$2,653. On average, noncollegiate schools were the least costly to attend (\$1,066), whereas students in the third and fourth year of college had the highest average total costs (\$3,825).

No significant differences in total or component costs were found for sex categories, but a sizable difference in cost was observed across race and ethnic groups. Hispanics had lower average tuition and fees (\$1,275) and total costs (\$1,882) than any other group. Costs did not differ between White and Black students.

The average total cost for dependent students was much higher (\$4,387) than that for independent students (\$1,923). Dependent students may include some of the people attending higher cost colleges and universities. In addition, dependent students may be more likely to attend school on a full-time basis, driving up average costs. Independent students are probably more likely to look for low-cost educational sources and to attend school part-time—particularly if they are in the labor force supporting themselves or their family—which would also indicate lower costs.

Financial Aid

Fifty-one percent of the 20.6 million students who were enrolled in the previous year received some type of financial assistance from at least one source. This level of aid receipt was consistent across the various enrollment levels. The average assistance package (which

may include multiple sources of assistance) among persons who received aid was \$2,919 and varied significantly by level of enrollment. For people enrolled in the fifth year or higher of college, the average reported aid package was \$4,223, while those enrolled in non-collegiate institutions reported average packages of \$1,673. Aid packages were higher for students in the third and fourth year of college than for those in the first or second year (\$3,312 and \$2,573, respectively).

The most common source of aid (table 2) was employer assistance or Job Training Partnership Act (JTPA) programs, but this source provided the lowest average amount of aid, \$979. The single largest aid amount was that based on loans, \$3,155.

Although half of both men and women receive some form of assistance and both receive similar amounts, variation occurs in the sources of aid received. For example, women were more likely than men to have received aid from a Pell Grant (a need-based source) or a loan, while men were more likely to have received aid from veterans' programs or from their employer. Men were awarded a substantially higher amount than were women in terms of scholarships, fellowships, and tuition reductions (\$2,971 vs. \$2,068). This type of aid does not have to be repaid.

Differences in sources and amounts of aid were apparent across race and ethnic groups. Black students were more likely than others to report some kind of aid (58 percent). Average amounts of aid ranged from \$2,527 for Black students to \$4,032 for students of "other" races. White students were less likely than either Black or Hispanic students to have received a Pell Grant.

The proportion of students receiving aid decreases as family income increases, ranging from 60 percent of students in the low-income category to 44 percent in the high-income category. The average amount varies substantially as well, from \$2,427 for the high-income group to \$3,622 for the low-income group. In addition, because some types of aid are need-based, specific types of aid varied as well. Pell Grants and loans were the primary sources of funding for many low-income students, and employer assistance was the main source for students from middle- and high-income families. Slightly more independent students received financial aid (53 vs. 46 percent of dependent students). The average aid amount, however, was substantially higher for dependent students (\$3,729 vs. \$2,619). Dependent students were more likely to have received a Pell Grant, loan, or fellowship award, but independent students were much more likely to receive employer assistance (24 vs. 2 percent).

Costs Covered by Aid

Students who received aid had significant proportions of their costs covered (75 percent). Aid can take many forms and in many situations aid amounts cover not only tuition and fee costs, but other living expenses as well.

There was little variation among demographic and economic subgroups in the proportion of costs that were covered, with the major variation being the category of family income. Of students who received aid, those from the lowest income category had about 80 percent of their costs covered and those from the highest family income category had 69 percent of their costs covered.

Multivariate Analysis

A multiple regression that estimated the likelihood of receiving financial aid of any kind by simultaneously assessing the influence of gender, race, family income, schooling costs, level of enrollment, dependency status, and household size was undertaken. Results showed the likelihood of receiving financial aid was higher among persons from low-income households and lower among persons from high-income households. In addition, dependent students were less likely than independent students to receive aid; Black students were somewhat more likely than White students to receive it; and household size and schooling costs were positively related to the receipt of aid. Chances of receiving aid did not vary across level of school or gender when other factors were controlled.

Conclusion

Students continue to utilize an assortment of resources to finance their post-secondary education. Despite the availability and use of these sources, numerous students receive no assistance at all in paying for their schooling. On the other hand, many students manage to cover most or all of their costs, often by using a combination of aid sources. Although there is some variability in who receives aid and how much they receive, financial aid appears to be reasonably distributed among demographic groups, as well as in regard to the degree of financial need of the student.

Source: Sutterlin, R. and Kominski, R.A., 1994, *Dollars for Scholars: Postsecondary Costs and Financing, 1990-1991*, Current Population Reports, Household Economic Studies, P70-39, U.S. Department of Commerce, Bureau of the Census.

Food Spending in 1993

Food spending in the United States totaled \$617 billion in 1993, an increase of 3.7 percent over 1992. Purchases of food by Federal, State, and local governments accounted for 5.8 percent, up 0.1 percent from 1992, reflecting greater participation in Federal food assistance programs, particularly the Food Stamp Program.

Spending for food at home increased 2.2 percent, whereas that for food away from home rose 5.5 percent. Major categories of personal consumption that increased more than food included housing, transportation, and medical care. Ample food supplies and competition among food retailers and restaurants helped to moderate food-price increases.

Spending on alcohol totaled \$85.5 billion in 1993, a decrease of 0.4 percent from 1992. Expenditures for alcohol consumed away from home rose 2.0 percent, but this was offset by a 2.2-percent decrease in expenditures for alcohol at home.

In 1993, the share of total food dollars spent for food away from home reached 45.9 percent—a new high. The quantity of food eaten away from home rose to 34.9 percent of total food, also a new high. Of food dollars spent on food away from home, 34.6 percent was spent in fast food chains and 38.5 percent was spent in restaurants, lunchrooms, cafeterias, and for catering in 1993.

Where Americans shop for groceries has changed considerably over the past 15 years. In the mid-1980's, about

Food expenditures, 1992 and 1993

Expenditures	1992	1993	Change, 1992-93
	— Billion \$ —		Percent
All food and beverages¹	681.1	702.6	+3.2
All food (excluding alcohol)	595.3	617.1	+3.7
At-home food	327.0	334.1	+2.2
Sales	319.7	327.0	+2.3
Home production and donations	7.3	7.1	-2.1
Away-from-home meals	268.3	282.9	+5.5
Sales	237.9	251.2	+5.6
Supplied and donated ²	30.4	31.8	+4.5
Alcoholic beverages	85.9	85.5	-.4
Packaged	49.2	48.1	-2.2
Drinks	36.7	37.4	+2.0

¹These expenditures include all food and alcoholic beverages, regardless of who paid for them. Data may not total due to rounding.

²Includes subsidies for school lunch.

65 percent of grocery sales of food at home were made in supermarkets; in 1993, this share had dropped to 61 percent. Remaining food purchases for use at home occurred in other smaller grocery stores, specialty food stores, and a variety of other outlets.

Competition from retail establishments that emphasize lower prices, such as warehouse clubs, mass merchandisers, and deep-discount drug stores, is rising. Over 5 percent of food-at-home sales were made by such retailers in 1993.

Warehouse clubs (formerly called wholesale clubs) sell food to operators of small restaurants, institutions, and noncommercial groups, accounting for

40 percent of their food sales. The remaining 60 percent of food sales are to consumers. A number of mass merchandisers, also called discount department stores, now include a large supermarket section in their hypermarkets or supercenters. The newest supermarket competitor is the super-discount drugstore, which sells dry groceries (no perishables) at discount prices. As these newcomers to grocery retailing attempt to gain market share, many traditional supermarkets are fighting back by featuring bulk sales and large club packs at competitive prices.

Source: Manchester, A., 1994, 1993 Food spending picked up, *FoodReview* 17(3):33-36.

Prevalence of Overweight Among U.S. Adolescents, 1988-91

Among adults, overweight is associated with increased risk for death, coronary heart disease, diabetes, certain cancers, and diseases of the joints and gallbladder. Overweight during adolescence is associated with increased risk for overweight as an adult. Data from the third National Health and Nutrition Examination Survey (NHANES III) were used to track progress toward achieving the year 2000 national health objectives including those related to prevalence of overweight.¹

NHANES III used a stratified multistage probability design to obtain a sample of the civilian, noninstitutionalized U.S. population, age 2 months and over. Height and weight were measured as part of a standardized physical examination in a mobile examination center. Body mass index (BMI) was used as a measure of weight adjusted for height. For adolescents, overweight was defined in the year 2000 national health objectives using BMI cutoffs based on 85th percentile values (by sex and for specific ages) of the second National Health and Nutrition Examination Survey (NHANES II), conducted in 1976-80.²

¹The year 2000 national objective of concern states that overweight prevalence not exceed 15 percent among adolescents age 12-19 years.

²Weight is a less reliable measure of fatness in children and adolescents because growth causes changes in body composition. Therefore, this definition may classify some adolescents as overweight who do not have excess body fat.

Prevalence of overweight¹ among adolescents—United States, National Health and Nutrition Examination Survey, 1976-80 (NHANES II) and 1988-91 (NHANES III)

Sex/Survey	Sample size	Prevalence ² (percent)
Male		
NHANES II	1,351	15
NHANES III	717	20
Female		
NHANES II	1,241	15
NHANES III	739	22
Total		
NHANES II	2,592	15
NHANES III	1,456	21

¹Defined as body mass index ≥ 23.0 for males age 12-14 years; ≥ 24.3 for males age 15-17 years; ≥ 25.8 for males age 18-19 years; ≥ 23.4 for females age 12-14 years; ≥ 24.8 for females age 15-17 years; and ≥ 25.7 for females age 18-19 years.

²Data were weighted.

Of the 1,849 persons ages 12-19 selected for the survey, 1,632 were interviewed, 1,519 had a physical examination, and 1,490 (81 percent) had complete data for height and weight. Data were weighted to account for survey design and nonresponse.

During 1988-91, the prevalence of overweight among persons ages 12-19 was 21 percent, an increase of 6 percentage points since NHANES II (see table). Among male adolescents, 20 percent were overweight, compared with 22 percent of female teenagers.

Survey data suggest that the increased prevalence of overweight among adolescents is related to declining levels of physical activity as well as increases in energy intake. Changes in diet and activity levels are necessary for reducing overweight in the U.S. population.

Source: U.S. Department of Health and Human Services, Public Health Service, 1994, Prevalence of Overweight Among Adolescents—United States, 1988-91, *Morbidity and Mortality Weekly Report* 43(44):818-821.

Expenditure Patterns of Retired and Nonretired People

Increasing numbers of people are retiring earlier in life, while at the same time, many are living longer. These events, combined with demographic changes in the elderly population, make the consumption and savings behavior of the retired increasingly important. Using data from the 1986-87 Consumer Expenditure Survey, this study compared the expenditure functions of retired and nonretired people age 50 and older. The heterogeneity of older Americans was acknowledged by analyzing the effect of age, education, family status, race, income, and assets on 27 standard Consumer Expenditure (CE) categories.

The elderly population is diverse and can be divided into three distinct market groups: the young-old (65-74 years) who are usually still married and active; the old (75-84 years) who are frequently widowed and slowing down; and the very old (age 85 and older) who often need assistance with daily activities. The income and expenditures of the young-old and the older age groups are quite different. For example, the young-old receive higher Social Security benefits, because of their higher earnings levels, and they have better pensions and asset income.

By looking at different age groups, it is possible to determine a trend toward early retirement. The average age at retirement has declined because Social Security income can start at age 62. In 1967, 35 percent of retired male Social

Security beneficiaries were in the 62-64 age bracket; by 1987, the figure had increased to 67 percent.

The Sample

The sample included retirees and non-retirees who were age 50 or older in 1986-87; were single men, single women, or in husband-wife (only) households; and who completed the survey's questions on income. Those in the military or who were unemployed were excluded. The CE data include only consumer units in independent living status, including retirement communities, and not those in long-term care facilities. The table presents the characteristics of 2,607 households.

Income and Assets

Findings show the mean after-tax income of retired married couples was 58 percent that of employed couples. Retired single women had 53 percent of the income of employed single women, and retired men had 48 percent of that for employed single men. After-tax income of retired single men was 44 percent less than that of married couples and that of retired single women, 55 percent less.

The primary source of income for retirees was Social Security, followed by pension income. Retired single women received only about half as much pension income as retired single men and less than one-third as much as retired married couples. Similar patterns held for financial assets.

Although home ownership rates varied among the three groups, they were highest among the couples and lowest for single men. Nearly half of all single men age 50 and older were renters.

For each cohort, more of the retired than nonretired had a home without a mortgage.

Expenditures

Nonretired married couples spent 45 percent more than retired couples, whereas nonretired single men spent 65 percent more than retired men, and nonretired women spent 50 percent more than retired women. Among retired groups, single women spent 21 percent less than single men and 87 percent less than married couples.¹

All retired cohorts spent a significantly larger share of their total expenditures on food, food at home, utilities, and health care than did nonretired groups but a smaller share on food away from home and entertainment. Working married couples and single women allocated a significantly larger share to the work-related categories of apparel and services, transportation, alcoholic beverages, and insurance.

Results

The 27 expenditure variables were regressed for nonretired and retired households on two continuing independent variables (financial assets and income) and dummy variables for family status, age group, race, and education level. There were significant differences in all of the expenditure categories between the retired and the nonretired. The retired had a higher marginal propensity² to spend for food, alcohol, housefurnishings, apparel,

¹Pension and Social Security contributions were not used in calculating total expenditures or expenditure shares in this analysis.

²The marginal propensity to spend indicates how much of an additional dollar of income would be spent for a certain item or service.

Characteristics of retired and nonretired persons age 50 and older, 1986-87

Characteristic	Married couple		Single men		Single women	
	Retired	Nonretired	Retired	Nonretired	Retired	Nonretired
Number of observations	692	622	218	141	687	247
Mean age						
Men	70.9	61.2	71.8	59.9	NA	NA
Women	67.5	57.8	NA	NA	73.9	60.6
Mean income						
Before tax	\$19,461	\$36,091	\$11,241	\$23,620	\$8,665	\$17,614
After tax	\$18,374	\$31,894	\$10,142	\$21,272	\$8,363	\$15,679
Total expenditures	\$17,540	\$25,340	\$11,340	\$18,652	\$9,369	\$14,048
Average propensity to consume (in percent)	95	79	112	88	112	90
Mean number of vehicles	1.8	2.4	1.1	1.4	.5	1.0
	<i>Percent</i>					
Race (of reference person)						
White	92.6	93.1	83.0	87.9	89.2	88.7
Non-White	7.4	6.9	17.0	12.1	10.8	11.3
Educational attainment (of reference person)						
No school	1.3	0.5	2.3	0.0	1.0	0.4
Elementary (1-8 years)	24.1	12.7	36.7	14.2	31.3	9.3
High school (9-12 years)	49.1	43.4	43.6	40.4	47.9	46.2
College (13-16 years)	20.7	32.2	12.8	32.6	16.0	32.8
More than college (16 years or more)	4.8	11.3	4.6	12.8	3.8	11.3
Housing tenure						
Home with mortgage	20.8	46.3	6.4	23.4	6.7	27.5
Home without mortgage	65.2	44.1	49.5	27.0	53.0	41.7
Renter	14.0	9.0	43.1	48.9	39.7	30.0
Other	0	.6	.9	.7	.6	.8

NA = Not applicable.

Source: Rubin, R.M. and Nieswiadomy, M., 1994, *Expenditure patterns of retired and nonretired persons*, *Monthly Labor Review* 117(4): 10-21.

transportation, gas and motor oil, other vehicles, public transportation, health care, entertainment, and cash gifts. Notably, their higher marginal propensity to spend for transportation signified a greater tendency to travel. The non-

retired had a higher marginal propensity to spend for housing, shelter, dwellings, and life insurance.

Further analysis revealed that for the retired households, expenditures on

rented dwelling, other dwelling, other vehicles, public transportation, and cash gifts and contributions were positively affected by the amount of financial assets. Food, food at home, housing, apparel, transportation, personal care,

and reading materials were negatively affected. For the employed households, spending on alcohol, housefurnishings, public transportation, and entertainment were positively affected by the level of financial assets, whereas food at home, gasoline and motor oil, and tobacco were negatively affected.

Marital Status

For both the retired and working, married-couple households spent significantly more than single women for eight categories (food, food at home, utilities, gasoline and motor oil, other vehicles, health care, tobacco, and life insurance), all other things being equal. For six categories (housing, shelter, rented dwellings, household operations, apparel, and public transportation), they spent less. Retired married couples spent more than single women on alcohol, owned dwellings, other dwellings, and transportation, and less on housefurnishings and cash gifts and contributions. For retired women, a large portion of spending was allocated to housing. Spending on utilities and household operations absorbed much of the housing expense, rather than actual spending on shelter.

Retired single men, compared with single women, spend significantly more on food away from home, alcohol, all transportation areas (except public transportation), and tobacco; and they spend less on housing, shelter, and cash gifts and contributions. Both retired and working single men spend less than single females on utilities, household operations, housefurnishings, apparel and services, and personal care. Working single men spend significantly more on alcohol and rented dwellings in comparison with single women.

Married couples were the only group among the retired who had income greater than their expenditures. Retired single men and women spent 12 percent more than their after-tax income (see table). Nonretired couples and single men spent less than their after-tax income even when pension and Social Security contributions were accounted for; however, nonretired single women had a different scenario. Their expenditures plus pension and Social Security contributions slightly exceeded after-tax income.

Race

All other variables being equal, few household expenditures were affected by race. Those for which Whites spent more than non-Whites included gasoline and motor oil, entertainment, and alcohol; non-Whites spent more than Whites on public transportation. These patterns held for both retired and working people.

Education

About 44 percent of the nonretired had a college degree or more, compared with about 21 percent of the retired. Households who work and have high educational attainment spend more on alcohol, transportation, other vehicles, entertainment, and life insurance; and less on public transportation and tobacco. Retired highly educated households spent significantly more on alcohol, shelter, owned dwelling, gasoline and motor oil, health care, and reading materials but less on transportation than did households with an eighth grade education. Spending on health care was positively correlated with education levels; this may indicate better recognition of the importance of health care or better insurance coverage for the higher educated groups.

Age

The three older age cohorts were compared with those age 50-59. Households, both retired and working, over age 65 spent significantly more on health care and household operations. However, they spent less on gas, motor oil, and tobacco than the 50-59 age group. The retired over-age-75 group spent less on life insurance and alcohol but significantly more on cash gifts and contributions. Employed people who were in the 60-64 age group spent more on food away from home, and the 65-74 age group spent less on shelter.

Conclusion

Since people are living longer into their senior years, it is important that they start financial retirement planning early to avoid the dissaving problems of current retirees. Those most likely to benefit from advance planning are the least likely to pursue it. Retired single females dissave at unsustainable rates. Their income was only 44 percent of that for married couples, whereas on an equivalency basis, single households should have 58 percent of the income of a two-person household.

As the elderly population continues to grow in numbers and share, their income levels and spending patterns will be of increasing importance to policymakers and businesses. The expenditure patterns of the elderly, both retired and nonretired, will play an expanding role in driving economic trends, such as tourism, entertainment, health care delivery, and philanthropy.

Source: Rubin, R.M. and Nieswiadomy, M., 1994, Expenditure patterns of retired and nonretired persons, *Monthly Labor Review* 117(4):10-21.

Changing Social Security Benefits to Reflect Child-Care Years

In 1992, about 16 percent of women age 65 and over were below the poverty line.¹ The problem of poverty focuses attention on women's Social Security benefits, which are on average lower than men's. Lower lifetime earnings—in part from zero or reduced earnings when women take care of children or disabled relatives—determine the lower benefit level. Removing the effect of dropping out of the work force to care for children could possibly reduce poverty among older women. Moreover, some advocates argue that society should not penalize women who perform unpaid work in the home raising children by giving them lower Social Security benefits.

A proposal that would add a child-care dropout year exclusion to the retired-worker benefit formula² was assessed using data from the 1990 Survey of Income and Program Participation (SIPP) exactly matched to the Social Security Administration's record of lifetime earnings. This article examines the target efficiency³ of the child-care proposal in reducing poverty by estimating its effect on women of different economic and demographic characteristics.

¹Ed. note. The corresponding percentage for men age 65 and over was 9.

²A second proposal that would add a child-care credit to the formula for calculating the special minimum benefit (SMB) (a more generous Social Security benefit given to long-term workers with low earnings) was found to affect only about 1 percent of retired women and to increase their benefits only slightly.

³A minimal justification would require that the expenditures from the proposals increase the incomes of poor women more than the incomes of those who are not poor.

Calculating the Retirement Benefit

Social Security retired-worker benefits are usually based on the 35 years of highest earnings from age 22 through age 61, after dropping the 5 lowest years. Any years where earnings were higher before reaching age 22 or after reaching age 61 may be substituted. Earnings are wage indexed through age 60, and an average indexed monthly earnings (AIME) is calculated. The basic benefit is calculated giving proportionately more benefits to people with lower earnings.

When the highest 35 years of earnings are used, child-care years with no earnings or low earnings may be included in calculating the monthly average, thus lowering benefits. The child-care dropout proposal would increase the benefit by reducing the number of years used to compute average earnings. For example, with 5 dropout years, the average Social Security benefit would be based on the highest 30 years rather than 35 years.

The majority of women, however, currently receive benefits as wives or widows, and these benefits are based on their husbands' earnings history. When a woman is entitled to both her own retired-worker and wife/widow benefits, she receives the higher of the two. Thus, because these women effectively receive benefits based on their husbands' earnings, they would not be affected by adjustments of their retired-worker benefits for child care. It has been suggested that 90 percent of wives in the 1992-2006 retirement cohort and 85 percent in the 2007-11 retirement cohort will have earnings below their husbands' earnings and will receive a widow benefit upon their husbands' death.

Caregiving Proposal

The 102d Congress proposed to disregard up to 5 years with no paid work "occasioned by a need to provide child care or care to a chronically dependent relative" in addition to the 5 years of lowest earnings currently excluded from the benefit calculation. By reducing the averaging period, this disregard raises the average lifetime earnings per month and the Social Security benefits based on the average. Implicitly, this values full-time caregiving for Social Security purposes as the average earnings in years where there had been no caregiving.

Cohort Changes in Labor-Force Participation

The impact of the child-care dropout proposal depends on the extent of full-time caregiving and is sensitive to secular changes in women's labor-force participation. The labor-force participation rate of adult women increased from 29 percent in 1950 to 59 percent in 1992. Labor-force participation rates of wives with young children increased from 19 percent in 1960 to 60 percent in 1992. In the 1980's, the increase in women's labor-force participation was concentrated among women married to men with high earnings.

As a result, more recent birth cohorts of married women have had more years of Social Security-covered earnings, higher levels of average indexed earnings, and higher earnings relative to their husbands' earnings. Women born in the 1930's are still of working age but were mothers in the 1950's and 1960's when most mothers of young children did not work.

Data Source, Definitions, and Sample

SIPP data provided the work history and reason for being out of the labor force for at least 6 months. Reasons included caring for minor children, caring for elderly relatives, and caring for disabled relatives. A child-care dropout year is a year when a woman has no earnings and her child is under age 6.

Women born in the 1930's and 1940's who reach eligibility (age 62) in the years between 1992 and 2001, and between 2002 and 2011, respectively, were studied. Three groups of women were analyzed: all women (for comparison); women estimated to be future retired-worker beneficiaries (women, not necessarily mothers, with at least 5 years of covered earnings while ages 22-41); and mothers expected to receive benefits based on their own earnings—thus, *future retired-only mothers* (women whose own retirement benefits exceed their spouse or widow benefits at retirement age).

Under present law, a few women who would have received benefits based on their husbands' earnings will receive benefits based on their own earnings if caregiving years are dropped from the benefit computation. To estimate which women could be affected by this caregiving proposal, certain women were excluded from the third sample: nonmothers (by definition, they cannot care for their own children); widows (most receive benefits based on their husbands' earnings); and wives with monthly earnings below 30 percent of their husbands' earnings (these women usually receive spouse benefits at retirement age).

Child-Care Dropout Years

About 79 percent of all women in the 1992-2001 cohort and 67 percent of the 2002-11 cohort have countable child-care dropout years during the period when the women in these groups were ages 22-41. The three samples of women (all, future retiree, and future retired-only mothers) had similar percentages with caregiving years. At comparable ages, the earlier cohort averaged 5.1 dropout years and the later cohort averaged 3.8 (table 1). The retirement subsamples averaged about 1 less caregiving dropout year than all women.

Distribution of Caregiving

Average dropout year levels varied by selected characteristics (table 2). While Hispanic and non-Hispanic women had similar dropout levels, Black women averaged 1 year less—a significant difference. Dropout years were higher

among wives with more educated husbands. Also, dropout years increased with husbands' earnings among all women and future retiree women but not among future retired-only mothers. Thus, removing child-care dropout years from benefit calculations would help White and other women more than Black women; a policy implicitly subsidizing child-care years would also benefit economically advantaged women more than disadvantaged women.

The positive relationship between dropout years and socioeconomic circumstances was documented for retired-only mothers. Wives with higher levels of education, with college-educated husbands, and with annual family incomes over twice the poverty level averaged a fraction of a year more than other wives. Poor unmarried women, on the other hand, averaged about 1 dropout year more than other unmarried women.

Table 1. Average caregiving dropout years for women, based on earnings at ages 22-41 for those born 1930-49¹

Retirement cohort	Dropout year
1992-2001	
All women	5.1
Future retiree women	4.0
Future retired-only mothers	4.0
2002-11	
All women	3.8
Future retiree women	3.1
Future retired-only mothers	2.7

¹A caregiving dropout year is a year when a woman has no earnings and her child is under age 6. Retirees have 5 years of earnings at ages 22-41, and retired-only mothers include those whose own retirement benefits exceed their spouse or widow benefits at retirement age.

Table 2. Average caregiving dropout years for women, based on earnings at ages 22-41, by selected characteristics for those born 1939-49¹

Characteristic	Dropout year		
	All women	Future retiree women	Future retired-only mothers
Total	4.4	3.5	3.2
Retirement cohort			
1992-96	5.5	4.1	4.1
1997-2001	4.9	3.9	3.8
2002-06	4.3	3.5	3.2
2007-11	3.5	2.9	2.4
Marital status			
Currently married	4.9	3.9	3.1
Widowed	4.4	3.2	—
Divorced/separated	3.6	3.0	3.3
Never married	1.2	0.8	2.7
Race			
Black	3.1	2.3	2.3
White and other	4.6	3.6	3.3
Ethnicity			
Hispanic	4.4	2.3	3.4
Non-Hispanic	4.4	3.5	3.2
Annual family income relative to poverty			
In poverty	4.7	3.5	3.9
1-2 times poverty	4.3	3.2	3.0
Over 2 times poverty	4.4	3.5	3.1
Education (in years)			
0-11	4.4	3.3	3.0
12	4.7	3.7	3.3
13 or more	4.1	3.3	3.1
Husband's average covered earnings			
Median or below	4.6	3.6	3.3
Third quartile	5.1	4.0	3.0
Fourth quartile	5.1	4.4	2.8
Husband's education (in years)			
0-11	4.7	3.5	2.6
12	4.8	3.8	2.9
13 or more	5.0	4.1	3.4

¹A caregiving dropout year is a year when a woman has no earnings and her child is under age 6. Retirees have 5 years of earnings at ages 22-41, and retired-only mothers include those whose own retirement benefits exceed their spouse or widow benefits at retirement age.

Removing Dropout Years From Benefit Computation

The AIME for the years when women were ages 22-41 increased 14 percent if full-time caregiving years were excluded from the calculations. The estimated average adjustment on benefits would be about \$17 for retiree women and \$24 for retired-only mothers. The average lifetime increase in Social Security for women who would benefit from adjusting the Social Security benefit formula for child-care years would be about \$4,200.³

Women of higher socioeconomic status would benefit more, reflecting their higher number of child-care dropout years and their greater earnings level. Among future retired-only mothers, the average AIME would increase less for Black women than for White and other women and less for Hispanic women than non-Hispanic women. Retired-only mothers with 13 or more years of education would gain more than those with less education, and those living in families with income twice the poverty level would gain more than those with lower incomes.

The dropout proposal credits women who are out of the labor force but not mothers who work while providing care. Many women work in the paid labor market and raise young children at the same time. The growth over time in the labor-force participation rates of women with young children indicates that this phenomenon is becoming more common. These women are more likely to be in families with husbands who are

³This estimate is based on the observation that the typical married woman in the 1992-2011 cohort has a husband who is 3 years older; she begins receiving Social Security benefits at age 62; and the life expectancy of a 65-year-old man is about 14 years.

in poorer economic circumstances. The authors' view is that it is not equitable social policy to subsidize only the child rearing of women who do not work or who limit their hours of work or earnings.

The caregiving proposal primarily benefits older married women, but the poverty problem is concentrated among older single women. Only 6 percent of married women age 65 and over were below the poverty line in 1992, compared with 22 percent of widows and 26 percent of divorced, separated, and never married women.

In the future, older women's poverty is likely to remain a problem. Poor women are not well targeted by the caregiving dropout-year proposal. Policies to help poor older women might include increasing the size of Supplementary Security Income benefits and/or survivors' benefits in Social Security.

Source: Iams, H.M. and Sandell, S.H., 1994, Changing Social Security benefits to reflect child-care years: A policy proposal whose time has passed? *Social Security Bulletin* 57(4):10-24.

Would you like to publish in *Family Economics and Nutrition Review*?

Family Economics and Nutrition Review will consider for publication articles concerning economic and nutritional issues related to the health and well-being of families. We are especially interested in studies about U.S. population groups at risk—from either an economic or nutritional perspective. Research may be based on primary or secondary data as long as it is national or regional in scope or of national policy interest, and articles may use descriptive or econometric techniques. Manuscripts may be mailed to: Joan C. Courtless, Editor, Center for Nutrition Policy and Promotion. See page 63 for guidelines and complete address.

Recent Legislation Affecting Families

Public Law 104-1 (enacted January 23, 1995)—the Congressional Accountability Act, the first measure enacted in 1995, requires Congress to comply with many of the employment laws enacted for the private sector, thus ending the numerous exemptions that Congress had granted itself over the years. The law applies 11 major labor laws to Congress, including the Fair Labor Standards Act of 1938, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, the Occupational Safety and Health Act of 1970, the Americans with Disabilities Act of 1990, and the Family and Medical Leave Act of 1993. It allows any of the approximately 34,000 congressional employees to take claims against their employers to court, just as private-sector workers can do. The law codifies an existing Senate ban on personal use of frequent flier miles by Senators and their aides and establishes an Office of Compliance within the legislative branch to enforce its provisions.

Public Law 104-3 (enacted March 7, 1995)—amends the charter of the Veterans of Foreign Wars to make eligible for membership those veterans that fought in the Korean War or served in the Korean Demilitarized Zone subsequent to the War.

Public Law 104-4 (enacted March 22, 1995)—the Unfunded Mandate Reform Act of 1995 restricts the Federal Government from imposing expensive new requirements on State, local, or tribal governments without providing funding. This does not apply in the case of a

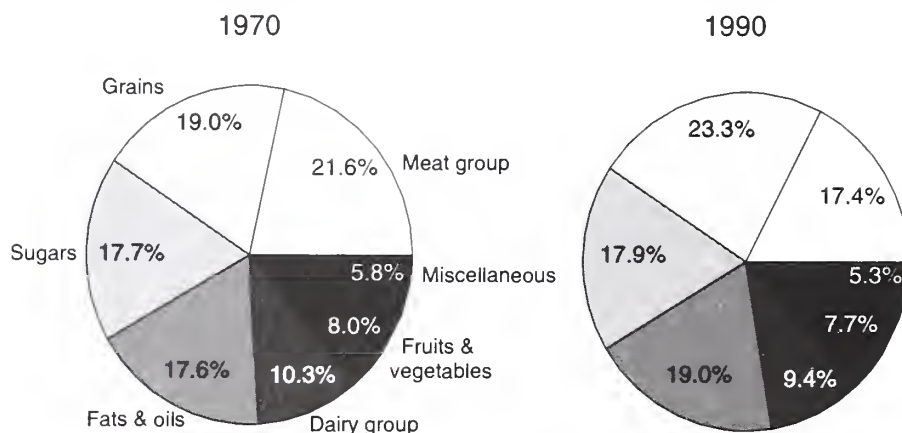
mandate required to enforce constitutional rights of individuals, to protect national security, or to carry out an emergency declared by the President. The Congressional Budget Office must estimate the costs of all new requirements on State or local governments of \$50 million or more a year, and requirements on private businesses of \$100 million or more a year. The law requires Federal agencies to conduct cost-benefit analyses of many new regulations and to consult with affected State, local, and tribal government officials before imposing rules containing mandates.

Public Law 104-5 (enacted March 23, 1995)—amends a provision of part A of Title IX of the Elementary and Secondary Education Act of 1965 related to Indian education. Under the law, a school must have at least 10 Indian students or the students must make up at least 25 percent of the enrollment of the school to be eligible for an Indian education grant.

Public Law 104-7 (enacted April 11, 1995)—amends the Internal Revenue Code of 1986 to permanently extend the deduction for health insurance costs of self-employed individuals. The law permits 3.2 million Americans to claim a 25-percent deduction for health insurance premiums they paid in 1994, with a permanent increase to 30 percent in 1995. The law contains a provision that repeals the current favorable tax treatment of the sale or exchange of radio and television stations to minority-owned businesses.

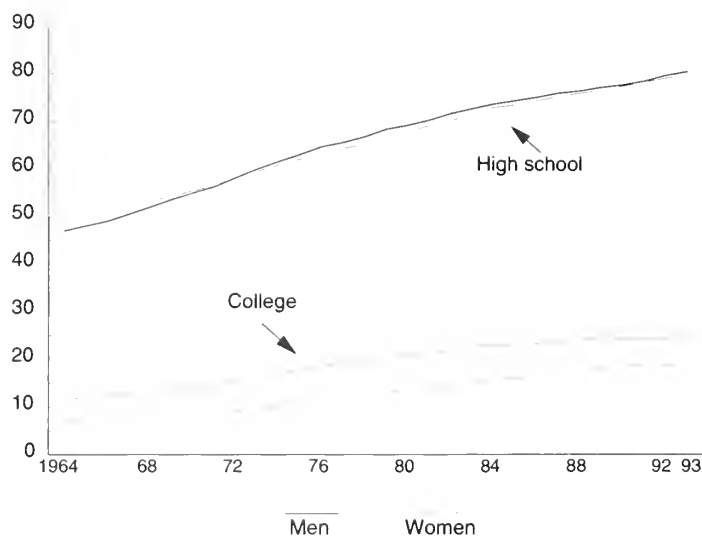
Charts From Federal Data Sources

Sources of food energy in the U.S. food supply, 1970 and 1990



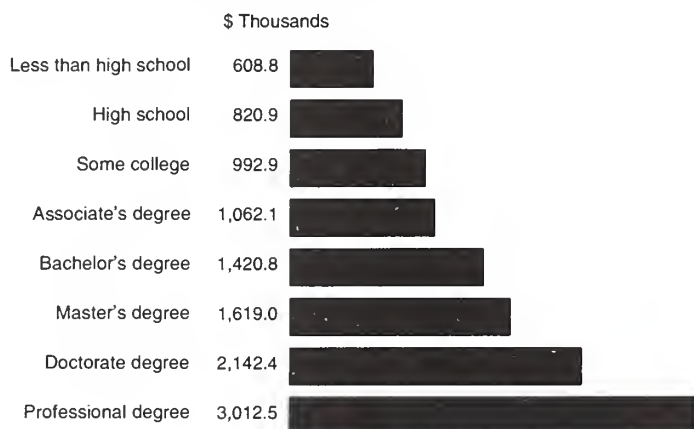
Source: Gerrior, S.A. and Zizza, C. 1994. *Nutrient Content of the U.S. Food Supply, 1970-1990*. Home Economics Research Report No. 52, U.S. Department of Agriculture.

Percentage of people 25 years and older who have completed high school or college, by sex, 1964-93



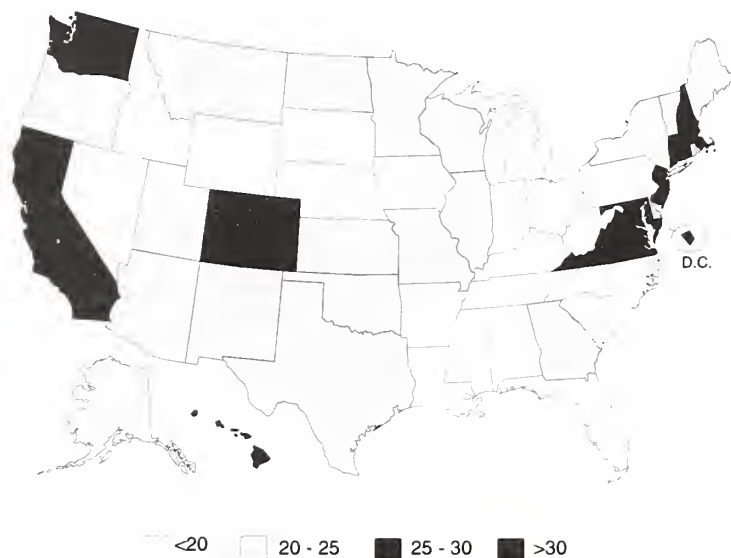
Kominski, R. and Adams, A., 1994, *Educational Attainment in the United States: March 1993 and 1992*, Current Population Reports, Population Characteristics P20-476, U.S. Department of Commerce, Bureau of the Census.

Estimates of worklife earnings by educational levels, 1992



Kominski, R. and Adams, A., 1994, *Educational Attainment in the United States: March 1993 and 1992, Current Population Reports, Population Characteristics P20-476*, U.S. Department of Commerce, Bureau of the Census.

Percentage of people 25 years and older with a Bachelor's degree or more, March 1993



Kominski, R. and Adams, A., 1994, *Educational Attainment in the United States: March 1993 and 1992, Current Population Reports, Population Characteristics P20-476*, U.S. Department of Commerce, Bureau of the Census.

Research and Evaluation Activities in USDA

From the Office of Analysis and Evaluation, Food and Consumer Service

The USDA Food and Consumer Service (FCS), formerly the Food and Nutrition Service, is responsible for administering the major Federal food assistance and nutrition education programs, including the Food Stamp Program, the National School Lunch and School Breakfast Programs, and WIC—the Special Supplemental Nutrition Program for Women, Infants, and Children. The FCS Office of Analysis and Evaluation (OAE) is responsible for conducting program-related research studies including legislative and budgetary policy analysis, descriptive studies of program participants, and evaluations of program impacts. The OAE has a total staff of about 45, including professionals in nutrition, economics, public policy, political science, and social science methodology who plan and administer the FCS research activities. Since Fiscal Year 1990, FCS research has been funded at about \$19 million per year, most of which was awarded through competitive contracting procedures.

This new feature of *Family Economics and Nutrition Review* highlights some of the research activities of the Office of Analysis and Evaluation. Included here and in future issues are descriptions of a few ongoing research efforts and/or summaries of some completed studies and analyses.

The Office of Analysis and Evaluation, Food and Consumer Service (FCS), USDA, recently initiated three research activities of interest to the nutrition community and other professionals concerned with family well-being.

Food Security and Hunger Supplement to the Current Population Survey

This activity adds questions on hunger and food security to the Current Population Survey (CPS), conducted by the Bureau of the Census, with a national sample of 65,000 households. The purpose of the Food Security Supplement is to obtain reliable data with which to estimate population prevalence of hunger and food insecurity. The Supplemental instrument is divided into four sections—food expenditures and program participation, food sufficiency, food scarcity and coping, and concern about food sufficiency—spanning the full range of resource-constrained food insecurity and hunger. These include a variety of specific behaviors, experiences, and direct perceptions that have been found, in various field surveys and analytic research, to provide valid and reliable indicators of the various dimensions of food insecurity and hunger.

Analyses of the CPS data will assist FCS and the other Federal agencies responsible for the National Nutrition Monitoring System in better identifying the dimensions of national food-insecurity problems, monitoring changes in these conditions, planning nutritional and other health-related policies, and assessing the impacts of policies undertaken. Initial results from this survey are expected to be available in early 1996.

Early Childhood and Child Care Study

This project examines the child component of the Child and Adult Care Food Program (CACFP). The three objectives are to:

1. Determine the nutrient composition of CACFP meals offered in family day-care homes and child-care centers;
2. Determine the contribution these meals make to participating children's usual dietary intake; and
3. Determine the extent to which the meal preparers' knowledge of nutrition, food-buying habits, and meal preparation practices affect the nutritional composition of meals that are offered.

One goal of *Healthy People 2000* is that 90 percent of the meals served in USDA's child nutrition programs meet the principals of healthy eating stated in the *Dietary Guidelines for Americans*. The Department will use this study to determine the extent to which CACFP is currently meeting this goal and to

explore ways to meet the goal by the year 2000. To do this, the nutrient content of CACFP meals will be compared with the Recommended Dietary Allowances (RDAs) and the *Dietary Guidelines for Americans*. Another concern is that with more children spending more time in child care, the importance of CACFP as a source of daily nutrition has grown. This study will determine the contribution of CACFP to children's overall dietary intake. The USDA will also use information about how meals are prepared in child-care facilities in order to design technical assistance materials for the people who prepare the meals.

Study methods will include observing children during CACFP mealtime and surveying their child-care providers and parents. Both the sample of child-care providers and the sample of children will be nationally representative of those participating in CACFP. Thus, estimates of the nutrient content of CACFP meals offered and consumed can be generalized to the population.

The National Survey of Food Stamp Recipients

The FCS is conducting a nationally representative survey of Food Stamp Program (FSP) recipients (and non-participating eligibles). The objectives are to understand clients' needs and views on program access and service levels, food security and benefit adequacy, and access to authorized stores. The project will collect data from a random sample of 2,400 low-income households on food security, food assistance utilization, experience with the FSP and attitudes regarding FSP administration, nutrition knowledge and attitudes, and household sociodemographics. Follow-up interviews with 900 FSP households will collect detailed data on food shopping patterns, food expenditures, and 7-day household food use.

The results will provide program administrators with a measure of the program's performance in reaching and serving its clientele. Further analyses will explore the effectiveness of the formula that determines a household's monthly benefit. The shopping patterns data will be analyzed to identify potential store access problems and determine the economic value that participants derive from FSP store authorization policies. Household food security measure will be developed and compared with measure of nutrient availability and store access.

For more information on any of these activities, call the Office of Analysis and Evaluation at (703) 305-2019.

A new book, "Measuring Poverty: A New Approach," proposes a new poverty measure based on the income available to families for purchasing their basic needs. This new measure shows more working families, and fewer families that receive government assistance, as living in poverty. The book is published by the National Research Council of the National Academy of Sciences.

Poverty thresholds for nonfarm families, 1965-94, may be found on p. 60.

Data Sources

Continuing Survey of Food Intakes by Individuals (CSFII)

Sponsoring agency: U.S. Department of Agriculture

Population covered: Noninstitutionalized U.S. population residing in households. For 1985-86—women 19 to 50 years and their children ages 1 to 5 years and for 1985 only, men ages 19 to 50 years. For 1989-91—individuals of all ages. For 1985-86—two separate samples (all income and low income). For 1989-91—two separate samples (all income and low income) combined through sample weights. For 1994-96—oversampling of the low-income population, young children, and the elderly.

Sample size: For 1985-86—4,000 individuals from 2,700 households (all income); 4,100 individuals from 2,400 households (low income). For 1985—660 men from 630 households. For

1989-91—15,200 individuals from 6,700 households. For 1994-96, between 15,000 and 16,000 respondents over 3 years.

Geographic distribution: 1985-86 and 1989-91—coterminous United States; 1994-96—Nationwide.

Years data collected: 1985-86 and 1989-91; 1994-96 in progress.

Method of data collection: 1985-86—food intake for 6 days: the first obtained by personal interview, the next 5 (2 months apart) by telephone wherever possible; 1989-91—food intake for 3 consecutive days obtained by 1-day recall and 2-day record during two personal visits; 1994-96—food intake for 2 nonconsecutive days obtained by personal interview.

Future surveys planned: 1994-96 survey is under way.

Major variables: Food and nutrient intakes are reported by time and name of eating occasion, source of food eaten at home (1994-96 only) and away from home, and nutrient content of each food eaten. Individual—sex, age, race, education, employment, pregnancy/lactation status, “self-reported” height and weight, and ethnicity (Hispanic or non-Hispanic). Household—income, size, cash assets, region, urbanization, tenancy, and participation in Food Stamp and WIC programs.

Sources for further information and data:

U.S. Department of Agriculture
Agricultural Research Service
Survey Systems/Food Consumption
Laboratory
4700 River Road, Unit 83
Riverdale, MD 20737
(301) 734-8457

Diet and Health Knowledge Survey (DHKS)

Sponsoring agency: U.S. Department of Agriculture

Population covered: 1989-91—main-meal planners/preparers in households eligible for the Continuing Survey of Food Intakes by Individuals (CSFII); 1994-96—adults 20 years or older in households.

Sample size: 1989-91—5,700 respondents drawn from CSFII-responding households. 1994-96—5,000-6,000 over 3 years.

Geographic distribution: 1989-91 coterminous United States; 1994-96, Nationwide.

Years data collected: 1989-91; 1994-96 in progress.

Method of data collection: Telephone interviews following the collection of food intake data in the CSFII (or in-person interviews where appropriate).

Future surveys planned: 1994-96 survey is under way.

Major variables: Attitudes, knowledge, and behaviors related to the Dietary

Guidelines for Americans. CSFII data on food and nutrient intake can be linked to data on dietary knowledge and attitudes for the same individual. The 1994-96 survey will include questions on the use of food labels and attitudes toward using them.

Sources for further information and data:

U.S. Department of Agriculture
Agricultural Research Service
Survey Systems/Food Consumption
Laboratory
4700 River Road, Unit 83
Riverdale, MD 20737
(301) 734-8457

Journal Abstracts

The following abstracts are reprinted verbatim as they appear in the cited source.

Avruch, S. and Cackley, A.P. 1995. Savings achieved by giving WIC benefits to women prenatally. *Public Health Reports* 110(1):27-34.

The Special Supplemental Food [sic¹] Program for Women, Infants, and Children (WIC) provides supplemental food, nutrition and health education, and social services referral to pregnant, breastfeeding, and post-partum women, and their infants and young children who are both low-income and at nutritional risk. A number of statistically controlled evaluations that compared prenatal women who received WIC services with demographically similar women who did not receive WIC services have found WIC enrollment associated with decreased levels of low birth weight among enrolled women's infants. Several also have found lower overall maternal and infant hospital costs among women who had received prenatal WIC services compared with similar women who did not receive prenatal WIC services.

A meta-analysis of the studies shows that providing WIC benefits to pregnant women is estimated to reduce low birth weight rates 25 percent and reduce very low birth weight births by 44 percent. Using these data to estimate costs, prenatal WIC enrollment is estimated to have reduced first year medical costs for U.S. infants by \$1.19 billion in 1992.

Savings from a reduction in estimated Medicaid expenditures in the first year

post-partum more than offset the cost of the Federal prenatal WIC Program. Even using more conservative assumptions, providing prenatal WIC benefits was cost-beneficial. Because of the estimated program cost-savings, the U.S. General Accounting Office has recommended that all pregnant women at or below 185 percent of Federal poverty level be eligible for the program.

Patterson, R.E., Kristal, A.R., Lynch, J.C., and White, E. 1995. Diet-cancer related beliefs, knowledge, norms, and their relationship to healthful diets. *Journal of Nutrition Education* 27(2):86-92.

Our objective was to examine the prevalence of diet- and cancer-related psychosocial constructs in a population-based sample and their association with healthful diets. We administered a random digit dial survey on cancer-related risk behavior to 1972 adult Washington state residents. The psychosocial constructs were belief in an association between diet and cancer, knowledge of National Cancer Institute diet recommendations, knowledge of fat and fiber composition of foods, and perceived pressure to eat a healthful diet (norms). Diet measures were self-reported healthful diet changes over the previous 5 years, percent energy from fat, and dietary fiber. Age and education were significantly ($p \leq .001$) related to the constructs. Older adults (60+) had the lowest levels of belief, knowledge, and perceived norms. Participants with strong beliefs in a diet-cancer connection consumed 1.1 grams more fiber than those with no

belief (p for trend $\leq .001$), and participants with excellent knowledge of food composition consumed 2.1% less energy from fat than those with low knowledge (p for trend $\leq .001$). Perceived norms were only weakly associated with fat and fiber intake. Intervention strategies targeting beliefs and knowledge may help people adopt more healthful diets. The findings on perceived norms suggest that extrinsic motivations (such as pressure from others) may be less effective than intrinsic motivations (such as beliefs) on promoting healthful behaviors.

Crown, W.H., Ahlburg, D.A., and MacAdam, M. 1995. The demographic and employment characteristics of home care aides: A comparison with nursing home aides, hospital aides, and other workers. *The Gerontologist* 35(2):162-170.

This article uses data from the 1987, 1988, and 1989 Current Population Survey (CPS) to compare the characteristics of hospital, nursing home, and home care aides. The different types of aides were identified through cross-tabulations of the detailed industry and occupation codes available in the CPS. The results verify previous findings in the literature that home care workers tend to be older, less likely to be married, and have poorer educations than other types of aides. In addition, the three types of aides fall into a clear economic continuum with hospital aides tending to be the most affluent, followed by nursing home aides, and finally, by home care workers.

¹Ed. note: Name has been changed to Special Supplemental Nutrition Program for Women, Infants, and Children.

Poverty Thresholds

Weighted average poverty thresholds¹ for nonfarm families of specified size, 1965–94

Calendar year	Unrelated individuals			Families of 2 persons or more							Annual average CPI, all items (1982–84 = 100)
				2 persons							
				Householder under age 65	Householder age 65 or older	3 persons	4 persons	5 persons	6 persons		
	All ages	Under age 65	Age 65 or older	All ages	age 65	or older					
1965	\$1,582	\$1,626	\$1,512	\$2,048	\$2,114	\$1,906	\$2,514	\$3,223	\$3,797	\$4,264	31.5
1966	1,635	1,685	1,565	2,115	2,185	1,970	2,600	3,335	3,930	4,410	32.5
1967	1,675	1,722	1,600	2,168	2,238	2,017	2,661	3,410	4,019	4,516	33.4
1968	1,748	1,797	1,667	2,262	2,333	2,102	2,774	3,553	4,188	4,706	34.8
1969	1,840	1,893	1,757	2,383	2,458	2,215	2,924	3,743	4,415	4,958	36.7
1970	1,954	2,010	1,861	2,525	2,604	2,348	3,099	3,968	4,680	5,260	38.8
1971	2,040	2,098	1,940	2,633	2,716	2,448	3,229	4,137	4,880	5,489	40.5
1972	2,109	2,168	2,005	2,724	2,808	2,530	3,339	4,275	5,044	5,673	41.8
1973	2,247	2,307	2,130	2,895	2,984	2,688	3,548	4,540	5,358	6,028	44.4
1974	2,495	2,562	2,364	3,211	3,312	2,982	3,936	5,038	5,950	6,699	49.3
1975	2,724	2,797	2,581	3,506	3,617	3,257	4,293	5,500	6,499	7,316	53.8
1976	2,884	2,959	2,730	3,711	3,826	3,445	4,540	5,815	6,876	7,760	56.9
1977	3,075	3,152	2,906	3,951	4,072	3,666	4,833	6,191	7,320	8,261	60.6
1978	3,311	3,392	3,127	4,249	4,383	3,944	5,201	6,662	7,880	8,891	65.2
1979	3,689	3,778	3,479	4,725	4,878	4,390	5,784	7,412	8,775	9,914	72.6
1980	4,190	4,290	3,949	5,363	5,537	4,983	6,565	8,414	9,966	11,269	82.4
1981	4,620	4,729	4,359	5,917	6,111	5,498	7,250	9,287	11,007	12,449	90.9
1982	4,901	5,019	4,626	6,281	6,487	5,836	7,693	9,862	11,684	13,207	96.5
1983	5,061	5,180	4,775	6,483	6,697	6,023	7,938	10,178	12,049	13,630	99.6
1984	5,278	5,400	4,979	6,762	6,983	6,282	8,277	10,609	12,566	14,207	103.9
1985	5,469	5,593	5,156	6,998	7,231	6,503	8,573	10,989	13,007	14,696	107.6
1986	5,572	5,701	5,255	7,138	7,372	6,630	8,737	11,203	13,259	14,986	109.6
1987	5,778	5,909	5,447	7,397	7,641	6,872	9,056	11,611	13,737	15,509	113.6
1988	6,024	6,155	5,674	7,704	7,958	7,158	9,435	12,092	14,305	16,149	118.3
1989	6,311	6,451	5,947	8,076	8,343	7,501	9,885	12,675	14,990	16,921	124.0
1990	6,652	6,800	6,268	8,512	8,794	7,906	10,419	13,360	15,800	17,835	130.7
1991	6,932	7,086	6,532	8,867	9,164	8,238	10,857	13,921	16,457	18,590	136.2
1992	7,141	7,299	6,729	9,132	9,441	8,489	11,187	14,343	16,951	19,146	140.3
1993	7,357	7,517	6,930	9,410	9,726	8,741	11,521	14,764	17,459	19,710	144.5
1994 ²	7,551	7,710	7,107	9,655	9,977	8,964	11,817	15,141	17,896	20,223	148.2

¹The **poverty thresholds** are used by the Bureau of the Census to prepare its statistical estimates of the number of individuals and families in poverty. The **poverty guidelines** are a simplified version of these poverty thresholds and are issued by the Department of Health and Human Services for administrative purposes. The poverty guidelines are used to determine whether a person or family is financially eligible for assistance or services under a particular Federal program.

²Preliminary data: 1993 weighted average poverty levels raised by 2.6 percent to correspond with the 1994 increase from the 1993 Consumer Price Index (CPI-U) for all urban consumers.

Cost of Food at Home

Cost of food at home estimated for food plans at four cost levels, June 1995, U.S. average¹

Sex-age group	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
FAMILIES								
Family of 2: ²								
20 - 50 years	\$53.50	\$67.50	\$83.60	\$104.30	\$231.40	\$292.60	\$362.20	\$451.90
51 years and over	50.30	65.00	80.50	96.60	218.00	281.50	348.80	418.40
Family of 4:								
Couple, 20 - 50 years and children—								
1 - 2 and 3 - 5 years	77.70	97.10	119.00	146.70	336.40	420.90	515.80	635.80
6 - 8 and 9 - 11 years	89.20	114.20	143.00	172.50	386.20	495.10	619.50	747.30
INDIVIDUALS³								
Child:								
1 - 2 years	14.00	17.10	20.00	24.30	60.60	74.20	86.80	105.40
3 - 5 years	15.10	18.60	23.00	27.60	65.40	80.70	99.70	119.60
6 - 8 years	18.50	24.70	30.90	36.00	80.30	107.20	133.80	155.90
9 - 11 years	22.10	28.10	36.10	41.70	95.50	121.90	156.40	180.60
Male:								
12 - 14 years	22.90	31.80	39.60	46.60	99.10	137.80	171.40	201.80
15 - 19 years	23.60	32.80	40.90	47.40	102.40	142.00	177.10	205.30
20 - 50 years	25.50	32.60	40.90	49.70	110.50	141.40	177.40	215.50
51 years and over	23.00	31.20	38.50	46.30	99.70	135.10	166.90	200.50
Female:								
12 - 19 years	22.90	27.50	33.40	40.40	99.30	119.00	144.80	175.10
20 - 50 years	23.10	28.80	35.10	45.10	99.90	124.60	151.90	195.30
51 years and over	22.70	27.90	34.70	41.50	98.50	120.80	150.20	179.90

¹Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in *Family Economics Review* 1984(1). Estimates for the other plans were computed from quantities of foods published in *Family Economics Review* 1983(2). The costs of the food plans are estimated by updating prices paid by households surveyed in 1977-78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics, *CPI Detailed Report*, table 4, to estimate the costs for the food plans.

²Ten percent added for family size adjustment. See footnote 3.

³The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person—add 20 percent; 2-person—add 10 percent; 3-person—add 5 percent; 5- or 6-person—subtract 5 percent; 7- or more-person—subtract 10 percent.

Consumer Prices

Consumer Price Index for all urban consumers [1982-84 = 100]

Group	Unadjusted indexes			
	June 1995	April 1995	May 1995	June 1994
All items	152.5	151.9	152.2	148.0
Food	147.9	148.4	148.3	143.5
Food at home	148.1	149.2	148.7	142.9
Food away from home	148.8	148.3	148.6	145.5
Housing	148.5	147.4	147.6	144.9
Shelter	165.5	164.7	164.8	160.1
Renters' costs ¹	174.7	174.1	173.7	169.6
Homeowners' costs ¹	170.6	169.6	170.0	164.8
Household insurance ¹	158.1	157.2	157.4	151.9
Maintenance and repairs	135.0	134.2	134.6	131.5
Maintenance and repair services	139.4	139.0	139.4	135.4
Maintenance and repair commodities	129.0	127.6	128.1	126.2
Fuel and other utilities	125.0	122.1	122.5	124.2
Fuel oil and other household fuel commodities	87.9	88.4	88.3	87.7
Gas (piped) and electricity	121.9	116.6	117.2	122.1
Household furnishings and operation	122.5	122.6	122.7	121.4
Housefurnishings	110.7	111.2	111.0	111.6
Apparel and upkeep	130.5	134.8	133.4	133.8
Apparel commodities	127.1	131.7	130.2	130.8
Men's and boys' apparel	125.5	127.0	127.9	125.9
Women's and girls' apparel	124.4	132.2	129.6	131.6
Infants' and toddlers' apparel	121.6	127.1	123.6	128.4
Footwear	124.6	127.2	126.6	127.3
Apparel services	156.9	157.7	157.7	155.5
Transportation	141.1	139.1	140.3	133.8
Private transportation	137.9	136.2	137.5	131.0
New vehicles	141.0	141.1	141.1	137.4
Used cars	158.3	156.7	157.7	140.9
Motor fuel	106.1	99.5	104.2	98.2
Maintenance and repairs	153.6	153.2	153.8	149.8
Other private transportation	169.9	170.9	170.5	161.3
Public transportation	182.5	176.7	176.7	169.9
Medical care	219.8	218.9	219.3	210.4
Medical care commodities	203.8	203.6	203.4	200.5
Medical care services	223.5	222.4	223.0	212.6
Professional medical services	200.8	199.5	200.2	192.3
Entertainment	153.2	153.3	153.6	149.8
Entertainment commodities	138.1	138.1	138.1	136.1
Entertainment services	171.2	171.3	171.8	166.3
Other goods and services	205.3	204.3	204.9	197.6
Personal care	146.7	146.3	146.6	145.2
Toilet goods and personal care appliances	142.8	142.2	142.9	141.8
Personal care services	151.0	150.7	150.6	148.8
Personal and educational expenses	232.5	232.1	232.3	220.9
School books and supplies	212.7	212.7	212.2	204.6
Personal and educational services	234.2	233.8	234.0	222.4

¹Indexes on a December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

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